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An Address.[1]

By J. G. WAGNER, B.Sc. (Queensland), M.B., Ch.M. (Sydney),

President of the Queensland Branch of the British Medical Association, Brisbane.

I WISH first to express my appreciation of the honour you have conferred upon me by electing me your President for the coming year. I am particularly conscious of this when I consider the character and ability of those men who have preceded me. I trust that I may carry the responsibilities of the task in a manner worthy of my predecessors and of the traditions of the Association.

At this critical stage in the history of the Empire it is natural that the successful prosecution of the war should take priority over all other matters that are of interest to us. One cannot attend a meeting within these walls without recalling to memory those colleagues who have already forsaken their former peaceful pursuits and the comforts of home for the adventures and hardships of active service. We look forward to the time when we shall welcome them home to enjoy the fruits of a victorious peace.

The soldier quickly learns that the practical purpose of true discipline is to secure successful collective action by the punctilious performance of his allotted task by every individual. In modern warfare the civilian needs to be imbued with an ideal of service that is no less zealous. Proper coordination of service and direction of effort are vital in war, and a source of profit in peace.

I confess to a certain amount of impatience with those who would settle the peace before they have won the war. And so I shall ask you to be patient with me whilst we traverse certain aspects of our experience, which may be of value in the days after the war. I shall endeavour to show that pre-war attempts at coordination and cooperation offer some hope of continuation with greater success in the post-war era.

For the British Medical Association in Australia not the least of post-war problems is that concerned with the organized provision of medical service for the public. The Federal Council has formulated its policy for a general medical service for Australia along lines which are generally well known and accepted throughout the Branches. This policy is based on the provision for every individual of a family doctor of his own choice, with a superstructure providing for specialist and ancillary services.

The investigations made by the Branches to obtain evidence for submission to the Royal Commission on national health insurance showed clearly the correctness of the decision to adopt the family doctor basis for medical service. It may be true that in Russia the industry or the factory is the correct basis of medical organization; it certainly is true that in our society anything that weakens the family and the home is inimical to our best interests. The family doctor type of medical service approaches nearer to private practice than any of its suggested alternatives.

One of the difficulties in deciding what type of service is best is the dissimilarity of the ideas of the various interested parties. Commonwealth and State governments and friendly societies all have their own ideas on this subject, and all are inclined to look with suspicion at the formulated policy of the medical profession. All fail to realize that, in a material sense, medical men have little to lose by the introduction of any form of service. They may lose many intangible things of great value, but their position in the employment market is secure. They may find themselves smothered with red tape, but regular pay, regular holidays and less irregular hours will be some compensation.

[1] Delivered at the annual meeting of the Queensland Branch of the British Medical Association on December 13, 1940, at Brisbane.

If, however, a badly planned service is introduced, the patient is the first to feel its effects. This is tragic when it is realized that the welfare of the patient is the first consideration of governments, friendly societies and doctors, and is the one common ground on which all meet. It is important, in considering health schemes, not to lose sight of the welfare of the patient.

For example, it has been shown that the service rendered to friendly society members by British Medical Association doctors in Australia is a concessional service. In fact, the remuneration per lodge service (three shillings) is half of the average remuneration per service (six shillings) in the private practice of a general practitioner. If allowance is made for such things as bad debts and free services, the usual half-guinea fee is reduced to six shillings. This fact has been recognized by the leaders of the friendly societies in Australia. It is considered also that the quality of the service is best when the concessional service is only a small portion of a doctor's practice, in which case it merges into his ordinary private practice. When a practice is completely concessional, the quality of service deteriorates, chiefly because the doctor is compelled to hurry through his work. Some evidence of this may be found in a comparison of the lodge statistics of New South Wales and Victoria, two States fairly comparable as to population and standards of living. In New South Wales the capitation fee is relatively high, the amount of sick pay is relatively low. In Victoria the capitation fee is relatively low, the amount of sick pay expended is relatively high. By economizing in capitation fee, the friendly societies have failed to make any saving, and, if the volume of sick pay is any criterion, the welfare of the patient has not been preserved.

In other countries where conditions are less satisfactory, this undesirable state of affairs is accentuated, until the ultimate absurdity is reached of a consulting room without an examination table, while the art of spot diagnosis replaces the science of clinical investigation. Even here the material interest of the doctor does not suffer, while the patient remains in blissful ignorance of the kind of medical care that is his just due.

To establish, then, a universal compulsory health insurance on the concessional basis of existing lodge practice is surely wrong and must defeat its own object. The correct figure lies between the three shillings earned per service in lodge practice and the six shillings earned per service in private practice.

To many it may seem that the hospital, rather than the family doctor, should be the foundation of medical service for the public, and that this plan would result in the greatest efficiency. This point of view appears to be favoured officially in Queensland.

In "one-man" towns, where the doctor has been part-time medical officer to the hospital and has been free to engage also in private practice, attempts have been made by the authorities to convert the position of hospital medical officer to a full-time appointment without any regard for the medical attention required by people in their homes.

In the larger towns somewhat similar action has been taken to enhance the scope of out-patient departments, so that they encroach on a field formerly the province of domiciliary practice. The tendency appears to be to set up a hospital staff to the exclusion of those medical men already practising in the town. Surely it would be more efficient, from the broader point of view of service to the whole community, to make use of all the available medical resources in both hospital and domiciliary practice.

In Brisbane the nature of the problem again is different. During the depression a large number of unemployed persons found themselves living in outlying suburbs, with no provision for medical service and no money for fares. As a result of their protestations, the Brisbane and South Coast Hospitals Board established out-patient departments in a number of more remote suburbs, to be visited on certain days per week by an out-patient team of doctor, nurse and pharmacist. This is very good so far as it goes; but it falls very far short of the best that is possible. Of what value is it to the sufferer from asthma or from renal colic? Or even to a mother with sick babies?

The friendly society type of service, on the contrary, is available for urgent needs on all days and at all hours, as far as this is humanly possible. It seemed a simple solution of the problem of medical service for the unemployed to have them placed on the lodge lists of doctors and pharmacists in their area, the capitation fees to be provided by the State. By this means the unemployed patient would receive his medical attention either at the doctor's surgery or in his own home, and he would be on the same footing as the doctor's other patients. By the preservation of this type of practice it continues to be possible to develop that highest type of all practice, in which the family doctor is looked to as guide, philosopher and friend in many of the family's problems. I need hardly say that this solution was too simple to be adopted. The out-patient department, situated at the central hospital, would then be reserved for its most valuable function, that of consultation and investigation in the more difficult cases, as well as for treatment of casualties and of discharged patients, and for special out-patient treatment.

In a consideration of the management of a medical service such as a national health insurance service, the valuable administrative experience of the friendly societies must be kept in mind. For a period of a hundred years they have survived the difficulties of their undertaking and have established an institution of which they may well be proud. Any plan that threatens the stability of the friendly societies requires careful consideration on that ground alone. Medical men in the past have had their disputes with the friendly societies. They have had to take up the cudgels on their own behalf, and perhaps will have to do so again. It is a matter of repetition of history that friendly society executives have fought tooth and nail to resist any increase in the capitation fee, no matter how just the claim has been, even when they have admitted its justice in retrospect. On the other hand, it is to the credit of medical men in Queensland that when times of hardship and stress have occurred, the requests of the friendly societies for reduction in capitation fee have not fallen on deaf ears.

But most of this, as far as the Brisbane area is concerned, is ancient history. In the modern version the capitation fee to be paid by the friendly societies is subject to annual alteration according to a formula agreed upon, so that it rises or falls with the "nominal wage index number, adult males, for Queensland", as determined by the Commonwealth statistician. This is embodied in an agreement between the Council of the Queensland Branch of the British Medical Association and the Friendly Societies' Medical and Hospital Council.

It is hoped to extend the same machinery to other areas of the State, in order to promote peace between the doctors and the friendly societies, so that they may go on with their real work, namely, the prevention of disease and the care of the sick. The establishment of this agreement, the removal of the capitation fee from the realms of bickering and argument, stands to the credit of one man. I refer to Dr. T. A. Price. He was able to win the trust of the friendly society leaders and to convince them that his motives were above suspicion.

The friendly society leaders of that time are worthy of credit, in that they had sufficient vision to cooperate in drafting and accepting this agreement. They were accused by their critics of being too friendly with the doctors.

Arising out of these discussions a joint committee of the Council of the Queensland Branch of the British Medical Association and of the Friendly Societies' Medical and Hospital Council came into existence. Three representatives of each body meet to consider matters of mutual interest and to make recommendations to each council as a result of their deliberations. Much of the business is concerned with complaints by doctors and lodge patients against one another—mostly, of course, complaints by patients against doctors. I consider that this joint committee has been an unqualified success. Almost invariably agreement has been reached by both parties. The friendly

society representatives have always been most fair minded and quick to recognize and dismiss the trivial complaint, whilst firmly representing their own point of view. I think that those friendly society members who have served on the joint committee have come to recognize that the average doctor is giving his patients a high standard of service. They know that the medical representatives on the joint committee will not support their medical colleagues when they believe them to be wrong. The most remarkable thing is that the total number of complaints has been so small. This is noteworthy as an example of successful cooperation between bodies whose interests sometimes clash, but who in fact are pursuing a common object. It is this cooperation that represents the germ of possible future development. I think there may be some value in discussing the workings of the friendly society medical service, because I regard it as the nucleus from which a complete and satisfactory service could be evolved for the whole community, with such modifications as might be found necessary.

Within the scope of existing friendly society services it should be possible to expand the principle of insurance, so that those extra costs which at present have to be met out of the pocket of the friendly society member could be covered wholly or in part by a weekly contribution spread over all members. Thus at present a confinement fee of five guineas is paid by the member. It should be a simple matter for this amount to be paid in full from a fund to which all members contributed.

With regard to other services, such as surgical operations, it would be wise to pay part only of the fee, leaving the balance to be paid by the member. This restriction, I fear, is necessary, human nature being what it is. I believe that a small fee, paid by the patient, is a necessary deterrent for night calls.

The fact that a schedule of charges for extra services has been arranged is a step towards this object. If a patient, needing an operation, was aware that 75% of a scheduled fee would be provided by insurance, one of his greatest worries would disappear.

It behoves the medical profession and the friendly societies to cooperate for the improvement and expansion of their existing medical services. They must realize that they are allies, not antagonists. If a national health insurance scheme eventuates, the improved organization can become part of the wider scheme. For the friendly societies the matter is vital.

Widespread State medical services threaten the friendly societies with extinction. To the public they offer a form of medical service believed to be inferior to a good lodge service—a distinction which the citizen fails to appreciate until he becomes the patient. The doctor alone is secure. He may lose some income, he may lose some independence, but his work goes on.

ACUTE INFECTIONS OF THE UPPER RESPIRATORY TRACT IN SOUTH AUSTRALIA: A NOTE ON THE "WOODSIDE THROAT".

By BARBARA COOKE, NANCY ATKINSON, JESSICA MAWSON and E. WESTON HURST.

(From the Institute of Medical and Veterinary Science, Adelaide.)

AT the request of the military authorities we studied between June and August, 1940, the local variant of the respiratory infection recently prevalent in all the camps of Australia. In addition to bacteriological investigation of post-nasal swabs, we sought evidence of the activity of a filtrable virus. Patients were drawn from two different camps more than 20 miles apart; all save one were in the first four days of the illness, the main clinical features of which are described elsewhere in this issue by Captain S. L. Seymour.

Bacteriological Findings.

Swabs were inoculated onto horse-blood agar plates within one or two hours of collection. Colonies suspected to be *Hæmophilus influenzæ* were subcultured into Fildes's broth; these organisms did not grow in nutrient broth. The growth requirements of a number of strains were later studied by Professor A. E. Platt, who agreed that the organisms were true *Hæmophilus influenzæ*. The results of culture appear in Table I.

TABLE I.

Bacteriological Findings in Thirty-four Soldiers Suffering from Infection of the Upper Respiratory Tract in the Period from June to August, 1940.

Case Number.	Duration of Symptoms. (Days.)	Bacteriological Findings.[1]
I	2	*Hæmophilus influenzæ*, *Streptococcus viridans*, (*Streptococcus hæmolyticus*).
II	4	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
III	2	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
IV	2	*Hæmophilus influenzæ*, green-zone streptococcus, *Streptococcus hæmolyticus*.
V	2	(*Streptococcus viridans*, Neisserian organism.)
VI	2	*Hæmophilus influenzæ*, green-zone streptococcus, Neisserian organism.
VII	3	(*Streptococcus viridans*, Neisserian organism, non-hæmolytic streptococcus.)
VIII	1	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
IX	2	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
X	4	*Hæmophilus influenzæ*, *Streptococcus viridans*, *Staphylococcus albus* (*Streptococcus hæmolyticus*).
XI	<1	*Hæmophilus influenzæ*, *Staphylococcus albus*.
XII	2	(*Streptococcus viridans*, Neisserian organism, *Staphylococcus albus*, diphtheroid.)
XIII	3	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism (*Streptococcus hæmolyticus*).
XIV	7	*Hæmophilus influenzæ*, *Streptococcus viridans*, *Staphylococcus albus*.
XV	3	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
XVI	2	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism (*Streptococcus hæmolyticus*).
XVII	<1	*Hæmophilus influenzæ*, *Staphylococcus aureus*.
XVIII	<1	*Hæmophilus influenzæ*, *Streptococcus viridans*. Neisserian organism (*Streptococcus hæmolyticus*).
XIX	3	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism.
XX	2	*Hæmophilus influenzæ*, *Streptococcus viridans*, Neisserian organism, *Streptococcus hæmolyticus*.
XXI	2	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus albus*, *Streptococcus hæmolyticus*.
XXII	<1	*Hæmophilus influenzæ*, *Staphylococcus albus*.
XXIII	3	*Hæmophilus influenzæ*, *Staphylococcus albus*, green-zone streptococcus.
XXIV	2	*Hæmophilus influenzæ*, *Staphylococcus albus*, Neisserian organism.
XXV	2	*Hæmophilus influenzæ*, *Staphylococcus albus*, diphtheroid, (*Staphylococcus aureus*, *Streptococcus hæmolyticus*).
XXVI	2	*Hæmophilus influenzæ*, green-zone streptococcus, Neisserian organism, (*Streptococcus hæmolyticus*).
XXVII	3	*Hæmophilus influenzæ*, *Staphylococcus albus*.
XXVIII	2	*Hæmophilus influenzæ*, green-zone streptococcus, Neisserian organism.
XXIX	2	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus albus*.
XXX[2]	3	*Streptococcus hæmolyticus*.
XXXI	4	*Hæmophilus influenzæ*, Neisserian organism, *Staphylococcus albus*.
XXXII	3	*Hæmophilus influenzæ*, green-zone streptococcus, Neisserian organisms.
XXXIII	1	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus albus*, Neisserian organism.
XXXIV[2]	<1	*Streptococcus viridans*, *Staphylococcus aureus*, Neisserian organism.

[1] The organisms in parentheses gave rise only to isolated colonies.
[2] Clinically these cases were not typical of "Woodside throat".

Of 34 soldiers, two (Cases XXX and XXXIV) were considered not to be suffering from "Woodside throat"; clinically the condition of the remainder was typical. In Case XXX the patient had suffered from "Woodside throat" six weeks prior to the swabbing. In three cases (Cases II, XIII and XVI) mild respiratory symptoms (slight "cold" or cough) had preceded by three weeks, five days and two weeks respectively the acute onset of much more severe symptoms. Post-nasal swabs yielded *Hæmophilus influenzæ* in 29 cases (90% of those clinically typical), α-hæmolytic streptococci in 26 cases, and a Neisserian organism in 21 cases. Other organisms were encountered much less

frequently; β-hæmolytic streptococci occurred in 11 cultures, in seven of which they were present only as rare colonies.

To ascertain the prevalent naso-pharyngeal flora of an unaffected military population, we examined post-nasal swabs from 40 "normal" recruits (Table II). Of the men supplied by the military authorities, 18 complained of slight "cold" or sore throat, while three had shown such symptoms a week or so previously. From these 21 men *Hæmophilus influenzæ* was isolated in 9 cases, and α-hæmolytic streptococci were isolated in 12, β-hæmolytic streptococci in 4, staphylococci in 9, Neisserian organisms in 13, and diphtheroids in 9. From the remaining 19 men *Hæmophilus influenzæ* was obtained in 5 cases, and α-hæmolytic streptococci were obtained in 14, β-hæmolytic streptococci in 2, staphylococci in 12, Neisserian organisms in 10, and diphtheroids in 4.

TABLE II.

Bacteriological Findings in Forty "Normal" Recruits Examined on August 17, 1940.

Case Number.	Symptoms.	Duration.	Bacteriological Findings.[1]
I	Slight sore throat.	7 days.	*Staphylococcus albus.*
II	——	——	Green-zone streptococcus, Neisserian organism.
III	——	——	Neisserian organism.
IV	——	——	Green-zone streptococcus, Neisserian organism.
V	——	——	Green-zone streptococcus, *Staphylococcus albus*, Neisserian organism.
VI	Slight sore throat.	3 days.	Neisserian organism.
VII	——	——	*Streptococcus pneumoniæ. Staphylococcus aureus*, Neisserian organism, (*Streptococcus hæmolyticus*).
VIII	——	——	*Hæmophilus influenzæ, Streptococcus pneumoniæ.*
IX	Slight sore throat.	7 days previously.	Green-zone streptococcus, *Staphylococcus aureus*, Neisserian organism.
X	Slight sore throat.	7 days previously.	*Hæmophilus influenzæ*, green-zone streptococcus, Neisserian organism.
XI	——	——	*Staphylococcus aureus, Streptococcus pneumoniæ.*
XII	Slight sore throat.	Several days.	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus aureus*, Neisserian organism, diphtheroid.
XIII	——	——	*Hæmophilus influenzæ, Streptococcus viridans.*
XIV	Slight "cold".	Few days.	*Streptococcus pneumoniæ*, Neisserian organism, diphtheroid, (*Streptococcus hæmolyticus*).
XV	Slight "cold".	Few days.	*Hæmophilus influenzæ, Streptococcus pneumoniæ*, diphtheroid.
XVI	Sore throat.	Several days.	*Streptococcus hæmolyticus.*
XVII	Slight "cold".	Few days.	Green-zone streptococcus, *Streptococcus hæmolyticus*, Neisserian organism, diphtheroid.
XVIII	Slight sore throat.	7 days previously.	Neisserian organism, diphtheroid.
XIX	——	——	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus aureus, Staphylococcus albus.*
XX	——	——	Green-zone streptococcus, Neisserian organism, *Staphylococcus aureus*, diphtheroid.
XXI	——	——	Green-zone streptococcus, *Staphylococcus aureus*, diphtheroid.
XXII	——	——	*Hæmophilus influenzæ, Staphylococcus aureus.*
XXIII	——	——	*Hæmophilus influenzæ, Staphylococcus albus.*
XXIV	Slight "cold".	Few days.	*Hæmophilus influenzæ*, Neisserian organism, diphtheroid.
XXV	Slight "cold".	Few days.	*Hæmophilus influenzæ*, green-zone streptococcus, *Staphylococcus albus.*
XXVI	"Cold" and sore chest.	Few days.	*Hæmophilus influenzæ, Streptococcus pneumoniæ*, Neisserian organism.
XXVII	Slight "cold".	Few days.	Green-zone streptococci, Neisserian organism, *Staphylococcus albus*, diphtheroid.
XXVIII	——	——	Green-zone streptococci, diphtheroid.

[1] The organisms in parentheses gave rise only to isolated colonies.

TABLE II—*Continued.*

Bacteriological Findings in Forty "Normal" Recruits Examined on August 17, 1940.—Continued.

Case Number.	Symptoms.	Duration.	Bacteriological Findings.[1]
XXIX	——	——	*Streptococcus hæmolyticus*, Neisserian organism, diphtheroid.
XXX	"Cold."	Few days.	*Streptococcus hæmolyticus*, Neisserian organism, *Staphylococcus albus.*
XXXI	"Cold."	Few days.	*Streptococcus viridans*, diphtheroid.
XXXII	——	——	*Streptococcus viridans*, Neisserian organism, *Staphylococcus albus.*
XXXIII	"Cold" and sore throat.	Few days.	*Hæmophilus influenzæ, Staphylococcus albus*, diphtheroid.
XXXIV	——	——	Green-zone streptococcus, Neisserian organism, *Staphylococcus albus.*
XXXV	Slight sore throat.	Few days.	*Staphylococcus aureus*, Neisserian organism.
XXXVI	——	——	No growth.
XXXVII	"Cold."	Few days.	*Hæmophilus influenzæ, Staphylococcus albus.*
XXXVIII	Slight "cold".	Few days.	Green-zone streptococcus, Neisserian organism.
XXXIX	"Cold."	Few days.	*Hæmophilus influenzæ*, green-zone streptococcus.
XL	——	——	Green-zone streptococcus, *Staphylococcus albus*, Neisserian organism.

Between January and September, 1940, throat swabs from 57 patients in the Royal Adelaide Hospital were examined in the same manner as those above, and also by direct smears. In eight cases the latter showed Gram-negative bacilli which may have been *Hæmophilus influenzæ*, but which did not appear in culture. From only one swab, collected in August from a civilian with symptoms typical of "Woodside throat", was *Hæmophilus influenzæ* cultivated.

The possible significance of these findings is discussed below.

Search for a Virus.

Pooled nasal washings from seven, five, eight and four "early cases" respectively were passed through Berkefeld N filters previously "lined" with broth. The bacteriologically sterile filtrates were instilled intranasally under ether anæsthesia into a total of 7 ferrets, 24 mice, 2 rabbits, 2 guinea-pigs and a monkey (*Macaca mulatta*). Several of the ferrets had a rise in temperature three to five days after inoculation; the temperatures of some control ferrets were similarly subject to unexplained irregularities. In no case was fever produced in passage ferrets given filtered nasal washings or suspensions of the turbinate bones from inoculated ferrets with pyrexia. All other animals remained well. Later the ferrets and the mice were fully susceptible to intranasal instillation of influenza virus (Melbourne strain, kindly supplied by Dr. F. M. Burnet); the serum of the ferrets did not neutralize this virus.

Bacteriologically sterile filtrates of human nasal washings were inoculated also into the amniotic cavity of developing hen's eggs, according to the new technique of Burnet.[(1)] After eight to fifteen serial passages at three- or four-day intervals there was no evidence of the presence of a virus in any of six series of eggs; many of the embryos survived in a healthy condition, and sections of their lungs were wholly normal. After three to nine serial transfers, passage of amniotic fluid into four ferrets and six mice caused no illness. The animals had no rise in temperature and were not immune to subsequent intranasal instillation of influenza virus. The serum of the ferrets did not neutralize this virus.

Experiments with animals and with developing hen's eggs having failed to reveal the presence of a filtrable virus, it still seemed possible that a virus pathogenic only for man was the primary infecting organism. An appeal was made, therefore, for volunteers who would permit spraying of the nose and throat with bacteriologically filtered nasal washings of affected soldiers. The experiments were carried out in two batches, each with the nasal washings

from five human patients pooled and passed through a Berkefeld N filter. On each occasion the noses and throats of five persons were sprayed. They were chosen from those who claimed not to have suffered from sore throat or "cold" for a year or more. We had no means of isolating them under hospital conditions before and during the experiment.

Of ten persons whose noses and throats were sprayed freely with an atomizer in both nostrils and in the throat (about one or two cubic centimetres of filtrate were administered), seven remained without symptoms and had no rise of temperature. One person in the first batch and two in the second batch developed mild respiratory symptoms—in one case a sore throat, in the second a sore throat and a cough, and in the third a coryza, sore throat and cough. In all cases the spraying was performed between 2 p.m. and 3 p.m., and symptoms appeared about 8 p.m. or 9 p.m. on the same day. Inquiry revealed that the first two persons had within the days immediately preceding the spraying been in contact with patients who had respiratory infections. The third sufferer denied contact with anyone suffering from respiratory infection, and had not been to a public function or social gathering where such contact might have passed unnoticed. Clinically the condition of none of the patients suggested the diagnosis of "Woodside throat"; the second alone showed a slight rise of temperature. The first two patients contracted what appeared to be typical "Woodside throat" about a month after the experiment; one was then sufficiently ill to be admitted to hospital.

In regarding the results of the human experiments as inconclusive and probably negative we were influenced by the following considerations. The clinical condition resulting in three of ten persons inoculated was not characteristic of "Woodside throat"; two of the three subjects were completely afebrile, and two contracted typical "Woodside throat" about a month after the experiment. At a time when a number of milder respiratory infections were prevalent in the community, pooled nasal washings might well contain a virus such as that of the common cold; if, therefore, the symptoms observed were due to our inoculations, they were not necessarily caused by the agent responsible for the "Woodside throat". It is curious that in each case symptoms began in the short time of six or seven hours after inoculation; the experimental common cold usually has an incubation period of about twenty-four hours.[2][3] Two subjects admitted previous contact with persons suffering from acute respiratory infection, and for this reason the apparently positive results, especially as they were obtained so promptly after inoculation, must be regarded with suspicion. Finally, for legal reasons, the risk accepted in submitting to inoculation was fully explained to the volunteers. The intrusion of psychological factors in experiments of this nature—Dochez *et alii*[2] record a most striking example—may possibly explain the one positive finding apparently beyond suspicion. We were prevented from continuing these experiments by the disappearance of "Woodside throat" from the camps.

Discussion.

We were unable to demonstrate the influenza virus or definitely to incriminate another virus in the ætiology of cases of "Woodside throat". Since our experiments with human subjects led to no clear-cut result, it is on the whole improbable that a filtrable virus was the primary infecting agent in these cases. On the other hand, bacteriological studies revealed the presence in about 90% of cases of *Hæmophilus influenzæ*, often as the predominant organism. Other organisms isolated either were those commonly present in the naso-pharynx or were detected in so few cases that they cannot have played a direct part in the ætiology of the epidemic as a whole. Many "normal" recruits, both those apparently healthy and those suffering from minor respiratory infections, harboured *Hæmophilus influenzæ* in the naso-pharynx. In the routine work of the Royal Adelaide Hospital we have rarely encountered this organism, and then only recently in cases occurring among the civilian population of a respiratory disease comparable with that amongst the troops. The experience of Professor A. E. Platt, and of other bacteriologists in Australia, is that for many years *Hæmophilus influenzæ* has been but rarely isolated.

Two conclusions are possible from this work. One is that an undetected virus was responsible for the respiratory infection recently prevalent among the troops, and that *Hæmophilus influenzæ* was the most frequent secondary invader. The other is that *Hæmophilus influenzæ*, until now rarely encountered in Australia since the last pandemic of influenza, was the primary incitant, a distinct possibility in view of the recent work of Mulder.[4] Whichever conclusion is reached, the inferences are obvious. In the last pandemic of influenza *Hæmophilus influenzæ* played a very important part (according to modern thought a secondary one). It is probable that the coming winter will see a recrudescence of epidemic (virus) influenza. The prevalence of a virulent secondary pathogen may well determine the severity of ensuing complications.

Conclusions.

Hæmophilus influenzæ was present, often as the predominant organism, in about 90% of cases of "Woodside throat". It was present also in a significant number of "normal" recruits.

No clear-cut evidence was obtained of the activity of a filtrable virus in these cases.

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INFECTION OF THE UPPER RESPIRATORY TRACT IN RECRUITS IN SOUTH AUSTRALIA: "WOODSIDE THROAT" ("DOGS' DISEASE").

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IN this article I shall describe the clinical features of "Woodside throat" as observed in troops of my unit. I have not included figures, since observations were not carried out in a wholly scientific manner and what figures I could give would be of no statistical value. The article is intended as a clinical preamble to experimental work carried out in this State.

This particular infection of the upper respiratory tract first occurred amongst troops in this State in October, 1939. I saw only a few of the patients during the mild epidemic at this time. When recruiting became intensive in May, 1940, I became medical officer to a new unit which was the seat of an epidemic of alarming proportions. Of approximately 900 men, 400 developed the disease within the space of four weeks; at one stage 200 were off duty. No deaths occurred in South Australia. Needless to say, hospital facilities broke down and sleeping huts within the unit were turned into temporary wards with Australian Imperial Force nurses and members of Voluntary Aid Detachments in charge. The epidemic then died out almost as quickly as it started. As a regimental medical officer my difficulties were twofold. First, the men had to be returned to health, and secondly this had to be done with the least delay to training. As these two duties were often in direct opposition, great care had to be exercised in restraining over-zealous officers or recruits.

From a clinical viewpoint the epidemic appeared to be related to general lowering of the resistance of the troops by unusual life and unaccustomed sustained exercise, aggravated by various prophylactic inoculations. Probably the most potent cause was the exposure of men to mass infection when living and sleeping in barracks.

Symptoms.

The onset was either slow or sudden. When it was sudden, the disease was ushered in by severe headache, generalized pain, giddiness and severe sore throat, usually first apparent on waking in the morning. With a slower onset, slight headache and a "rasping" throat for several days preceded symptoms similar to those in cases developing more abruptly.

Common Characteristics.

The sore throat was often described as "burning fire in the throat". Almost invariably the men stated that the throat burned "from the top of the head down to the navel". The pain in the throat was usually accompanied by substernal pain and became excruciating after coughing. Frequently there was complete inability to swallow even the softest solids.

The cough was described as dry, and usually as coming from the stomach. Many patients felt that here was a great deal of sputum if they could only get it up, and some induced vomiting in an effort to accomplish this. The cough always aggravated the soreness of the throat, and occasionally pitiable efforts were made to restrain coughing.

The headache was frontal in situation and was characterized by waves of dizziness, causing many men to fall if they stood still for any length of time. When coughing they felt "as if the head was going to be lifted off". Later in the disease the head felt blocked "as if tightly packed". There were few complaints of discharge from the nose.

Other Characteristics.

Generalized pain was fairly common, particularly in the limbs and back. This was similar to the pain complained of in civilian life in so-called influenza. Vomiting was always the result of continued coughing and was commonly purposeful; it was mainly retching, but was often very distressing to the patient.

Signs.

The patients looked ill and had a drowsy and worried appearance. They were pallid, and the skin was moist, with beads of sweat on the forehead.

The pulse was fast and running and its volume was poor.

The temperature was usually high in the initial stages; 104° F. was a not uncommon reading, and 102° F. was usual. It was particularly liable to sudden fluctuations.

The respiration rate was increased with the pyrexia, but in uncomplicated cases returned to normal with defervescence.

The soft palate was red and injected, with a granular appearance, often simulating many minute blisters. Œdema of the soft palate was not uncommon.

When tonsils were present they were often uninvolved. The anterior and posterior pillars were purplish-red and occasionally œdematous. The appearance of the posterior portion of the pharynx varied; occasionally its colour was a generalized purplish-red, but often it showed simply streaks of swollen, red lymphoid tissue. If the tonsils were involved they were either simply swollen or showed a superimposed follicular tonsillitis. The latter was usually a later development.

The cough was hacking and spasmodic in type. In the early stages it was unproductive, except for occasional vomiting as a conclusion to the spasm. It commonly had a brassy note and was most distressing to hear. As the disease progressed the cough became productive with a small amount of sputum; but sputum was never profuse in uncomplicated cases. The sputum was often mixed with bright red blood, never very abundant, but when first seen very alarming. Bleeding was usually a late feature of the disease and subsided quickly. Its cause was apparently the rupture from continued coughing of small congested vessels in the trachea. It was not associated with signs in the chest.

Tracheitis was obviously one of the primary features of the disease; it was indicated by the feeling of sore throat extending to the umbilicus, by the substernal pain and by the type of cough. Tenderness was usually present in the sterno-clavicular notch. The fact that the cough was never particularly productive suggests that it was due simply to an acute inflammation of the mucous membrane with practically no exudation. Also I do not consider that in the uncomplicated case the inflammation spread from the trachea into the bronchi.

The eyes had a filmy look and gave the patient the appearance of being about to cry. The conjunctivæ were not grossly injected, and only slight filling of the vessels was present. In a number of cases conjunctival hæmorrhages were due probably to the spells of severe coughing.

In the early stages there was some nasal discharge of a muco-purulent nature without actual blocking of the air passages. Later the nasal discharge became more profuse and nasal obstruction resulted. Pain in the frontal sinuses and antra was frequent. In uncomplicated cases there were no signs in the chest. When the temperature remained high for several days moist crepitations were heard posteriorly, but these soon disappeared with defervescence.

Course.

The disease ran a rapid course. The temperature remained elevated for two to three days; it returned to normal by crisis and remained so except for an occasional evening rise to 99° F. on the first subsequent day. Symptoms abated with the fall in temperature, although the throat remained sore for several days. The cough persisted in a mild form for several weeks. Pronounced œdema of the soft palate took several days to disappear after the fall in temperature. In the average case the throat looked practically normal after two days' normal temperature, and the patient felt quite well except for general weakness.

The general course of the disease was affected by the stage at which the disease was recognized. Many of the more enthusiastic recruits endeavoured to "stick it out", and when they did collapse suffered a more stormy course than those who "reported sick" immediately symptoms were felt. Complications were higher in this group. Coincident vaccinal reactions also prolonged the course of the disease.

Complications.

As a rule complications appeared on the third or fourth day of the disease.

Delirium was seen in three cases; the men had avoided "reporting sick" for several days after the appearance of symptoms. It was always associated with a high temperature.

Epistaxis was at times severe and was aggravated by spells of coughing.

Sinusitis and antral infections were common during and after the disease, particularly when there was a previous history of trouble in the accessory nasal sinuses.

Laryngitis was always present in mild degree, but occasionally became very severe, causing complete loss of voice. The larynx was tender, and in severe cases the patients were quite unable to articulate.

Pneumonia was rare. The condition of many men with high temperatures was at first diagnosed as pneumonia by uninitiated civilian practitioners. However, the pyrexia and signs in the chest quickly disappeared with rest in bed. When first seen many of the men who had endeavoured to "stick it out" were found to have a bronchiolitis which for a day or so simulated bronchopneumonia. However, the speedy disappearance of both pyrexia and signs in the chest soon ruled out the latter. In debilitated men bronchopneumonia developed and ran a severe and worrying course. In my series of cases this occurred only once; but I have observed it in other units.

X-ray pictures were not taken in the presence of chest signs, so that it cannot be stated definitely that there were

no patches of bronchopneumonia. However, the fact that the majority of the men showed no signs in the chest after a week is in my opinion good clinical evidence against the existence of a pneumonic process and is strongly suggestive of bronchiolitis. Mild bronchitis often caused anxiety after the recovery from the severe stages of the disease.

One of my patients developed acute asthma. He had no previous history of this condition, and after prolonged convalescence recovered completely. The asthma was considered to be of infective origin.

One case of acute heart failure occurred. The patient was a man, aged thirty-eight years. The symptoms appeared abruptly after two days of high temperature, and were ushered in by a sudden attack of cardiac asthma. The man's temperature had been 103° F. for two days, and shortly before the attack it rose to 104° F. The man was in a critical condition for several days, but did not die.

I have since heard by word of mouth of a young man who died suddenly after an attack of "Woodside throat". He had returned to work against medical advice and collapsed several days later. A post-mortem examination revealed a fatty dilated heart.

Relapses were not uncommon; often the relapse was more severe than the primary attack. They usually occurred within seven days of the primary attack.

No unequivocal second attacks of the disease were seen. The men acquired the habit of calling every cold, sore throat or cough "dogs' disease"; but I can assert that no true second attacks occurred amongst the men of my unit.

Treatment.

The treatment was purely palliative. With the introduction of nurses into the wards the men felt better cared for and less worried about their symptoms; they were also much more cheerful. For the sore throat an aspirin "gargle and swallow" every four hours was found to be as good as any treatment. The cough was treated by *Mist. Expect. Sed.* (C.M.F. Pharmacopœia) and with *Linctus Codeinæ* at night. When severe tracheitis or laryngitis was present, inhalations with *Tinctura Benzoini Composita* seemed to give relief. Barbiturates were used freely to induce sleep, and to some men acutely anxious about their condition morphine was administered.

Generally, treatment consisted simply of rest in bed and sympathy. A large majority of the men were returned to full duty in seven days from the onset of the symptoms and did not feel that they were hardly treated. Those developing complications remained off duty for much longer periods.

Sulphanilamide was used by other medical officers; but at no time did I make use of this drug. In the cases in which the drug was used recovery did not occur more quickly than in those in my unit, and the patients felt so much weaker when the drug was discontinued that longer convalescence was needed. I am convinced that neither sulphanilamide nor sulphapyridine is indicated in this disease, and that they tend only to prolong illness. Even in cases of bronchiolitis they did not seem to hasten recovery.

Summary.

An infection of the upper respiratory tract of definite clinical type and affecting a large number of South Australian troops is described.

It was characterized by: (i) severe sore throat; (ii) dry, hacking, spasmodic cough; (iii) severe tracheitis, dry in type; and (iv) high temperature. The course of the disease was short.

Complications were not dangerous, other than one case of heart failure, which could not have been avoided.

The usual length of time off duty was seven days.

Treatment was purely palliative; sulphanilamide or sulphapyridine is not indicated in the treatment of the disease.

Acknowledgements.

I am indebted to Colonel A. R. Southwood for permission to publish this paper, and to Major F. N. Le Messurier for advice in its preparation.

INFLUENZA EPIDEMIC AT PUCKAPUNYAL.[1]

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DURING the winter and early spring of this year two epidemics of upper respiratory tract infection occurred at Puckapunyal camp in Victoria. They had in common a number of symptoms which, taken alone, might have suggested a diagnosis of influenza, that term being used to describe a disease due to a filtrable virus which is capable of causing a typical pyrexia in ferrets and has other characteristics which are referred to below. In the first epidemic, however, there occurred signs and symptoms not characteristic of influenza virus infections. These included congestion, often extreme, and inflammation of the pharynx, along with laryngitis and severe cough. Such was not the case in the second epidemic. In this, coryza was nearly always present, the site of infection was higher in the upper respiratory tract, and severe pharyngitis, laryngitis and cough did not occur. Search was made for the virus of influenza in both epidemics. In the first it was not found. In the second the virus was isolated, and influenza antibody in the serum of some patients after recovery was found in amounts much greater than those occurring in the serum of the same persons in the first two or three days of their illness. In this paper are described the laboratory methods used in investigation of this epidemic of influenza and some characters of the virus isolated.

Methods of Investigation.

In order to exclude from the investigation cases of streptococcal throat, throat swabbings were taken from patients and plated on blood agar. No predominant flora was found; the observations included only colony characteristics and the morphology of the organisms.

Throat Washings.

Throat washings were collected in the usual way. The patient gargled for two minutes with about 15 cubic centimetres of saline solution containing a small proportion of calcium and then returned the gargle to the container. To this gargle, half its volume of bacteriological broth was added. It has been my experience that, in this fluid, influenza virus will survive during the time necessary for transport of the specimen to a distant laboratory. Here the specimens were cleared of mucus by filtration through sterile filter paper, and then bacteriologically sterile filtrates were prepared by filtration through "Gradocol" membranes. The washings from the throats of ten patients, collected at various times during the progress of the epidemic, were examined.

In all instances "Gradocol" filtrates were inoculated in amounts of approximately 0·25 cubic centimetre into the amniotic cavity of batches of twelve-day chick embryos, following the technique described by Burnet.[(1)] In eight cases 0·5 to 1·0 cubic centimetre of filtrate was inoculated intranasally into an anæsthetized ferret. In seven cases 0·05 cubic centimetre of filtrate was inoculated intranasally into anæsthetized mice. In four of the batches of mice the animals were merely examined for pulmonary lesions at the end of seven days, but in the remaining three batches the immunity of the mice to known influenza virus was also tested.

Results in Eggs.—The changes produced in the chick embryo by influenza virus inoculated into the amniotic cavity have been described by Burnet.[(1)] With only one "Gradocol" filtrate ("G.C.") were these found in the present series. Both the Leishman-stained films of the cellular tracheal fluid and the embryonic lungs showed the typical appearances of influenza in this situation. The lungs were ground with quartz powder, mixed with pooled

[1] Work carried out at the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Royal Melbourne Hospital.

allantoic and amniotic fluids and centrifuged, and the supernatant fluid was inoculated amniotically into eggs. In this manner seven egg passages of the virus were made; from the fourth passage onwards, specific death of the embryo was occurring in the majority of eggs between the second and third day. Since the filtrate of the washings of the patient "G.C." was not inoculated into a ferret, the pooled fluids of the first amniotic isolation of the virus were used in ferrets 140 and 141. Both these animals showed signs, including the typical pyrexial response, of influenza. A "Gradocol" filtrate of nasal washings from one of these animals was inoculated amniotically into eggs. It produced the typical cellular tracheal fluid and lung appearances of influenza.

Results in Ferrets.—Of the eight ferrets inoculated intranasally with filtered throat washings, none showed signs of influenza. These ferrets were shown later to be non-immune to influenza by the ability of known virus to provoke a typical influenzal response in them.

Results in Mice.—Mice inoculated intranasally with filtered throat washings of the patient "G.C." showed no pulmonary lesions seven days later, but mice inoculated with pooled fluids of the first amniotic passage of the virus showed definite influenzal lesions in the lungs. Four mice of this batch were kept for an immunity test. In accordance with the method of Burnet and Foley,[2] two weeks after the first inoculation they were given intranasally 0·05 cubic centimetre of "Melbourne" mouse-adapted virus suspension diluted 1 : 100; four control mice were similarly given a dilution of $1 : 10^4$. The lungs were examined at death or seven days after the test inoculation. The controls showed the following pulmonary lesions:[1] 2, 2, 4^6, 4^7. The four immune mice showed no recent lesion, and old lesions 0, 1, 1, 1. They had in fact developed a solid immunity to the "Melbourne" strain influenza virus. The remaining six batches of mice were inoculated with filtered washings of patients from whom virus was not isolated, but in whose influenza antibody, in some cases, there was a significant rise, as described below, after their recovery from the illness. None of these mice showed pulmonary lesions at examination seven days after inoculation, nor was any immunity demonstrated in the three batches subjected to an immunity test. From the mice examined seven days after intranasal inoculation with pooled fluids of the first amniotic passage of "G.C." virus the lungs were removed and used for further mouse passages at intervals of five and later of four days. In the fifth passage six mice were used, and at four days showed lung lesions 1, 2, 2, 3, 4^4. The strain is obviously quickly acquiring mouse virulence.

Influenza Antibody in Patient's Serum.

In view of the difficulty in isolating the virus from a number of cases it became more important to examine for increase of influenza antibody serum from the patients from whom throat washings had been taken. "Early" specimens of serum were collected two, three or four days after the onset of the illness, "late" specimens more than two weeks after the onset.

The usual procedure for the titration of influenza antibody was followed (Burnet[3]).

Inactivated serum, diluted if necessary, was mixed with an equal volume of virus dilution and kept at refrigerator temperature for two hours. The virus suspension used—"Melbourne" egg-adapted strain—was titrated on the chorio-allantois in serial tenfold dilutions; its titre was approximately known before the test was set up. The diluting fluid in all cases was saline solution containing 10% normal horse serum. After standing in the refrigerator the mixtures of serum and virus and the dilutions of virus were inoculated in constant volume on the chorio-allantois of twelve-day developing eggs. After two days' incubation the chorio-allantoic membranes were removed and counts were made of the foci on the membranes. The dilution of virus and the serum-virus mixture were chosen which gave rise to numbers of foci that could be accurately counted, and calculation was made of the percentage of "surviving" foci to which the control count of foci was reduced by neutralization of virus with undiluted serum. The antibody titre of the serum may be expressed as the reciprocal of the proportion of surviving foci, which for practical purposes may be regarded as the dilution of the serum which just fails to effect any reduction in the number of foci.

In Table I are recorded the figures obtained in six sets of early and late specimens of serum of patients from whom no virus was isolated. Also included are the figures found for serum collected from patient "G.C." twenty-six days after the onset of his illness; no early specimen had been taken from him. In some patients a considerable increase in influenza antibody followed the infection; in others no increase was discovered. This result is referred to below.

TABLE I.

Influenza Antibody in Serum Taken Early and Late in the Course of the Infection

Patient.	Early Specimen.		Late Specimen.	
	Percentage of Surviving Foci.	Titre.	Percentage of Surviving Foci.	Titre.
Jo. ..	30·0	3	0·26	400
Da. ..	2·0	50	0·07	1,500
Di. ..	1·0	100	1·0	100
St. ..	0·021	5,000	0·025	4,000
Ru. ..	0·01	10,000	0·016	6,000
Cl. ..	0·004	25,000	0·003	33,000
G.C. ..	—	—	1·9	54

Estimations of antibody in the serum were also made by titrations in the mouse lung, according to the usual method of intranasal inoculation of mixtures of serum and mouse-adapted "Melbourne" virus which had been allowed to stand in the refrigerator for two hours. The mice were examined six days later and the pulmonary lesions were evaluated in the usual way. The results confirmed those obtained on the chorio-allantois as described above.

Antigenic Characters of the Virus Isolated.

The immune serum of ferret 140 was used in a brief study of the antigenic characters of the virus. Neutralization tests in mice were carried out in the usual manner. Fivefold serum dilutions—1 : 2, 1 : 10 and 1 : 50—were mixed with an equal volume of undiluted virus suspension. The mixtures were allowed to stand for two hours in the refrigerator before being intranasally inoculated into anæsthetized mice, used in groups of three. The viruses used were mouse-adapted "Melbourne", "W.S." and swine strains. Controls consisted of mice inoculated with virus suspensions diluted $1 : 10^4$. The results (Table II) are recorded by the usual convention for describing the degree of pulmonary consolidation. They show that the strain of virus "G.C." is of "Melbourne" type. The concentration of serum used failed to cover the range which would substantiate the suggestion in Table II that the serum had some protective power against "W.S."

TABLE II.

Neutralization of Standard Influenza Strains by the Immune Serum of Ferret 140.

Standard Strain.	Serum Dilutions.			Controls: Virus Diluted $1 : 10^4$.
	1 : 2.	1 : 10.	1 : 50.	
"Melbourne" ..	0 0 0	1– 1 1	4^4 4^4 4^4	3 3 4^7
"W.S."	3 3 4^4	4^4 4^4 4^4	4^4 4^4 4^4	4^7 4^7 4^7
"Swine"	4^4 4^4 4^7	3 4^4 4^4	4^4 4^4 4^4	3 3 3

Similar conclusions were reached when the activity of the serum against egg-adapted "Melbourne" and "W.S." strains was tested on the chorio-allantois. The percentages

[1] The usual notation of this laboratory for evaluating pulmonary consolidation is as follows: (i) consolidation of part of one lobe; (ii) consolidation of more than one lobe, but not more than half the total pulmonary tissue; (iii) consolidation of more than half the lungs; (iv) complete consolidation, the day of death being indicated by an index figure.

of surviving foci were 0·01 and 0·16 respectively, and the titres of the serum, expressed as described above, were 10,000 and 600 respectively.

Discussion.

In the present work difficulty in isolating virus from patients suffering from influenza is noteworthy; in only one of ten cases was the attempt successful. Stuart-Harris, Wilson Smith and Andrewes[4] have reported a similar result, having found influenza virus in throat washings taken during an epidemic in only seven instances in 59 attempts. Such, however, has not previously been the experience in this laboratory. The available evidence suggests that the quantity of virus present in the washings may be the factor determining whether or not infection of the appropriate laboratory animal will ensue. Thus, as has been stated above, the filtered throat washings of the patient "G.C." produced no lesions in the mouse lung, but the virus in the pooled allantoic and amniotic fluids from the first amniotic passage produced recognizable influenzal pulmonary lesions. The mice were, moreover, rendered immune to the closely related "Melbourne" strain. It has been shown by Burnet[2] that influenza virus multiplies actively when inoculated amniotically in the chick embryo. Here, therefore, the quantity of virus inoculated accounts for the discrepant results with filtered washings and fluids from the first amniotic passage. Whether this quantitative explanation is sufficient is, however, doubtful. The nature of the virus strain must also be considered, but from this aspect is insufficiently known to make discussion profitable.

The estimations of the influenza antibody titre of early and late specimens of serum revealed some points of interest, chief of which was the fact that in the patients "Di", "St", "Ru" and "Cl" no significant change in antibody was associated with the infection. Clinically the condition of these patients was not distinguishable from "G.C.", from whom virus was isolated, or from "Da" and "Jo", in whom considerable increase in serum antibody titre occurred. The observation that antibody may not increase after infection, presumably influenza, is not new; Stuart-Harris, Wilson Smith and Andrewes[4] in the 1939 influenza epidemic in England found that in only 20 cases of 63 investigated was a significant increase found. It may be that the antigenic stimulus of an infection with influenza virus is sometimes ineffective, either because antibody is already present in high titre, as in patients "St", "Ru" and "Cl", or because antibody production fails to occur for some unknown reason, as in the patients "Di" and possibly "G.C." It must be recognized, however, that there is an alternative hypothesis—namely, that an ætiologically different infection occurred simultaneously with or gradually replaced true influenza virus infections. This view is favoured by Stuart-Harris, Wilson Smith and Andrewes[4] as a result of their investigations of the epidemic in England in 1939. In the earlier phases of the Puckapunyal epidemic the patients "G.C.", "Jo", "Da" and "Di" were infected. With the exception of "Di" they were proved to have been infected with influenza virus. Presumably individuals with low influenza antibody were selectively attacked this time. At least two weeks later infection of "St", "Ru" and "Cl" occurred. In these cases, in which no increase in antibody titre followed the infection, it may be argued that the antibody production had already reached the maximum of which the individual was capable. It was, however, so high that they would generally be considered to be immune to influenza. Because this serological evidence of immunity is apparently at variance with the fact that infection did occur, and because no recognized serological change followed infection, the possibility that a condition clinically indistinguishable from influenza had replaced the true influenza virus infection must be admitted. As has been stated, such is the view favoured by others and supported by failure to isolate virus from such patients. The evidence reported in this paper does not permit a final decision between the conflicting hypotheses. Probably the investigation of future epidemics will supply the answer to the question.

Summary.

1. In an epidemic of influenza at Puckapunyal camp influenza virus was isolated.
2. The virus is found to be closely related to the "Melbourne" strain.
3. Some characters of the virus are described.
4. The significance of changes in the influenza antibody titres in serum taken from patients infected during the epidemic is discussed.

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THE PATCH TEST AS A MEANS OF DIAGNOSIS IN CONTACT DERMATITIS.

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HYPERSENSITIVENESS by direct contact to certain plants and chemicals is well known and the resulting skin lesion is usually called a "contact dermatitis". The patch test is an easy and simple method of detection of the cause, but care is necessary in the interpretation of the results.

The Importance of a Careful History.

When a case of this nature is being investigated it is extremely important to take a very thorough history. The character and position of the initial lesion are of great diagnostic significance, since this disorder usually begins on the exposed parts of the body, whereas atopic or hæmatogenous eczema tends to commence on the unexposed parts of the body, and especially on the flexures.

The symptoms are well known, but may be recapitulated with advantage. Pruritus or itching is the most important subjective symptoms and often occurs before the lesion becomes obvious. Then follows a reddened and thickened area on the skin, with the later formation of blisters, either of vesicular or of bullous type. There may be much weeping. In atopic eczema, on the other hand, papule formation or lichenification in the reddened skin is usually noticed. Scratching may cause secondary infection with pustule formation. The condition tends to recur paroxysmally at certain times if the contactant is not constant and may recur seasonally when it is due to some plant. If the irritation seems aggravated when the patient is at work and better at home, an occupational allergy is to be suspected. It is important to inquire carefully into the local applications made when the lesion first appeared, as some constituent of these may be the cause of the trouble, the initial lesion not being a contact dermatitis at all. A family history of allergy is important. The general health of the patient should be investigated, and a search should be made for any foci of infection.

The occupation of the patient is significant, and inquiries should be made as to whether he handles any plants or flowers. Contact with bedding and clothing, and especially with dyed materials, should be investigated.

Contactants.

The following contactants are commonly used in the testing, although it may be necessary to test with many more when the history does not give a lead as to the cause.

Plants.

Rhus toxicodendron and others of *Rhus* family	*Primula obconica*
Dogwood	Capeweed pollen (very important in Victoria)
St. John's wort	Rye pollen
Exhibition border	Plantain
Chrysanthemum	Any other plants or pollens suspected

Chemicals.

Formalin (10%)	Potassium permanganate (1% aqueous solution)
Oil of cloves (1% in alcohol)	Potassium dichromate (0·5% solution)
Nickel sulphate (5% aqueous solution)	Resorcin (10% in alcoholic solution)
Para-phenyl-diamine (2% in "Vaseline")	"Lysol" (0·5% aqueous solution)
Picric acid (saturated solution)	Mercuric chloride (1% aqueous solution)
Borax (saturated solution)	Turpentine (50% in olive oil)
"Novocain" (1% aqueous solution)	Oil of bergamot
Pyrethrum (2% in alcohol)	

Miscellaneous.

Animal hair and furs	Orris root
Silk	Kapok
House dust oil	Linseed meal
Old tuberculin (1 : 10)	

Skin Tests.

Skin tests by the scratch and intradermal methods are necessary if one is not certain whether the lesion is a contact or atopic type of dermatitis; but actually scratch tests are of no use in a contact dermatitis, while "patch" tests are of no value in atopic eczema. Sometimes the causative factor can be determined without the aid of "patch" tests by the history and examination. The most likely offending agents should be tested first. When it is suspected that the case is one of contact dermatitis the "patch" test may be used. It is a simple test, and consists of the application of the suspected material directly to the uninjured skin surface.

Technique.

The following is a simple method for patch testing:

Use strips of one-inch adhesive plaster, to which are applied small half-inch squares of filter paper. If more than one patch is to be used on the strip, the patches should be at least an inch apart. The suspected material is applied to each piece of filter paper, a small quantity only being used. If the material is a liquid, one drop is sufficient. In the case of a pollen or powder one should moisten the centre of the patch and add as much as will cover the tip of a penknife. When materials are likely to fall out, such as plant leaves *et cetera*, a piece about one-eighth of an inch square is stuck to the paper with a little "Clag" (care being taken to make a control "Clag" patch test). Each test should be plainly marked and the exact position on the arm should be entered on the patient's history card.

It is wise when applying the patch to stretch the skin gently and hold the patch in place until the plaster is well adherent. The tests are carried out on the back or the arm with equally good results, but the arm is found more convenient.

Some patients with unduly sensitive skin are irritated by adhesive plaster, and then "Cellophane" may be used, held in place by collodion flexile.

The patch should be allowed to remain in position for at least twenty-four hours, preferably for forty-eight hours; but sometimes a positive reaction may not occur for some days. If irritation is noticed before the end of twenty-four hours the patient should remove the whole patch and wash the arm carefully with warm water and apply a little methylated spirits. If the patient has to remove the patch he should be instructed to return it for reading.

Types of Reactions.

A positive reaction is indicated by the presence at the site of an erythematous area, frequently with vesicles, and it should tend to simulate the original lesion. A doubtful reaction may consist of a mild erythema and should be watched for later vesicle formation. A reaction to the adhesive plaster will be situated around the periphery of the filter paper, and consists of an area of erythema and papule formation, which tends to develop quickly and to disappear as quickly when the plaster is removed. This reaction may be non-specific or due to gum resin in the plaster.

Naturally, the number of materials used in the tests is many; but frequently the history gives a guide as to which agents should be first tested. When the history gives no clues, many tests may have to be made before a positive result is obtained. When the testing is being done with plants it is important that they should be fresh specimens. If a positive reaction is obtained, it should always be verified by the application of a second test with the same contactant, and the two results should be compared, great care being taken should the first test have produced a violent reaction.

Illustrative Cases.

The following cases illustrate the value of the patch test:

Mrs. G.N., aged fifty-six years, had for two years noticed irritation on the fingers and palms of the hands, followed later by erythema, vesicle formation and later desquamation. At intervals the lesion would flare up. The rash was always worse from August to Christmas, although one severe attack occurred in May, following the handling of chrysanthemums. The following results were obtained with patch tests:

Capeweed pollen, +	Chrysanthemum pollen, ++
Capeweed leaf, ++	Exhibition border leaf, +++
Capeweed pollen extract, ++	Tomato leaf, ++

Exhibition border, tomato plants and chrysanthemums were removed from her garden and a considerable improvement in her condition resulted. She also gave up gardening. It is likely that the capeweed pollen is the main factor, and the patient is having desensitization treatment with a watery extract of capeweed pollen.

Miss M.C., aged twenty-three years, had had dermatitis of the face, neck, arms and hands for three years. She also said that her mother had had similar attacks, often at the same time. A patch test with *Rhus toxicodendron* produced a positive reaction at the end of twenty-four hours, which spread over a much wider area in two or three days. The area was also very irritable, and much blister formation occurred. When the rhus leaf was described the patient brought one in from a rhus creeper which was growing over her back porch. This was tested for confirmation, and a positive result was obtained. The rash has not recurred since the removal of this plant. The patient and her mother had moved to this house just prior to the start of the condition.

Mr. S.L., aged fifty years, a farmer, had complained of dermatitis of the face, hands and forearms for years. The first attack came on in November and it was always worse in the spring. He had also complained of a blocked nose at these times. When patch testing was carried out the patient was found to be sensitive to capeweed pollen, and he is now satisfied by his own observation that this is the cause. He endeavours to expose himself as little as possible to the pollen by covering the exposed parts effectively. So far no satisfactory methods of desensitization have been found. Two methods of treatment have been tried: desensitization with aqueous capeweed extract and inunction with an ointment made from the oily residue of an ether extract of pollen. These methods do not seem to have given much relief. A preparation of oily extract of capeweed pollen for intramuscular injection presents many difficulties and is not practicable in this case, especially as results by this method are doubtful.

Mr. S.M., aged twenty-four years, a mill hand, had complained of severe attacks of dermatitis of the hands and face for two years. He had noticed that the condition would flare up when he worked amongst timber and suspected that it might be due to dogwood. An acetone extract of dogwood leaf was "patched" on his arm and produced a "+++" reaction after twenty-four hours' contact; an acetone control test produced no reaction. Since he has avoided contact with dogwood he has been free of dermatitis. No attempt was made at desensitization.

The following case is recalled from memory, as the history card cannot be traced at the hospital.

A trapper had complained of an extensive dermatitis of the exposed parts for some months; he suspected that it was caused by contact with St. John's wort. He gave a large blister-like reaction to the weed when it was "patched" on his arm. The reaction was very severe and took several days to subside when the patch was removed.

St. John's wort was introduced at Bright and has become prevalent as far south as Bairnsdale. It is most profuse during the spring and summer.

Conclusion.

In my experience capeweed pollen is a very important cause of contact dermatitis in Victoria, especially in the grazing areas and coastal regions. It commences to pollinate at the end of August in the northern parts of Victoria, but in Gippsland tends to start later, about the middle of October. An unduly dry season usually means an early pollination. It is difficult to avoid contact, as the pollen is to a certain extent wind-borne, and therefore must come in contact with exposed parts. So far no satisfactory means of desensitization have been found, which is contrary to the successful results obtained in cases of hay fever.

Rhus toxicodendron (often called "poison ivy") is found sporadically in gardens in Melbourne, and its presence is frequently unsuspected. It is certainly the most poisonous contactant I have encountered.

Garden primulæ are frequently blamed for rashes on the hands; but contrary to this, I have not encountered one case of dermatitis due to contact with *Primula obconica*. *Primula obconica* and *Primula sinensis*, which cause dermatitis in England, are not grown here to any great extent, as they are hot-house flowers.

Acknowledgement.

I wish to thank Dr. Charles Sutherland for kindly allowing me access to his private patients.

THE WANGENSTEEN-COLLER TREATMENT OF PERITONITIS, ILEUS AND INTESTINAL OBSTRUCTION.

By W. MAXWELL,
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THE Wangensteen-Coller method is best described in three sections: the duodenal suction technique introduced by Wangensteen and a further development in the intestinal intubation method of Abbott, the replacement of lost chlorides and the correction of water imbalance; the last two measures owe their origin to the advocacy of Coller.

Suction Drainage.

Wangensteen[1] groups possible obstructions in the following manner: (*a*) the suction group and (*b*) the immediate operation group. The suction group is made up of the following cases: (i) those in which suction is the only treatment carried out; (ii) those in which suction is used first, followed by operation; (iii) those in which suction has proved unsuccessful in effecting decompression and operation becomes imperative. The immediate operation group is made up of the following cases: (i) cases in which the obstruction is intraperitoneal, (ii) those in which strangulated hernia is present, (iii) cases of intussusception.

Wangensteen postulates, however, that suction must never be used as a diagnostic measure to indicate whether operation is necessary, conclusions being drawn from the amount and nature of the material sucked out. He repeats what we all know: that in the making of a diagnosis the cardinal guiding signs are intestinal colic and rebound tenderness. And he rightly regards tenderness as evidence of transudate—that is, strangulation—as distinct from simple mechanical obstruction.

Wangensteen's technique is as follows:

The catheter is passed into the stomach and suction is applied, the patient being placed in various positions until it is reasonably certain that the stomach has been emptied. The source of suction is then temporarily cut off, and the patient drinks a glass of water and is placed in the lateral decubitus with the right side down. The duodenal tube is advanced an inch every five minutes. After about thirty minutes the suction is reapplied and if the intestinal distension has not been great enough to divert the course of the tube, then bile will be aspirated.

This method is as satisfactory as that in which the passing of the tube is guided by fluoroscopy (Wangensteen's tube has an opaque tip, Levine's a non-opaque tip). To check the degree of relief of the distension Wangensteen uses "scout" films every twelve hours in cases in which suction is the only treatment carried out, and he gives sufficient fluid parenterally to provide 800 to 1,000 cubic centimetres of urine daily in which the presence of sodium chloride can be demonstrated.

It is interesting to note that enterostomy (high jejunostomy) for the relief of paralytic ileus was first advocated by Victor Bonney in 1910, when it was quickly found that if this measure was to be effective at all the bowel had to be opened high up. This affords a parallel with duodenal drainage as effected by the suction tube.

McKenna[2] points out that the recent great reduction in the incidence of paralytic ileus is due to the following factors: (i) earlier diagnosis in acute abdominal conditions, (ii) gentler handling at operation, (iii) the use of the Wangensteen suction method of decompression combined with the intravenous administration of fluid as first advocated by Coller.

Apart from the relief from constant vomiting afforded by suction and the comfort to thirsty patients of being able to take fluids by mouth, it produces its striking results by decompression of the small bowel, which is evidenced to the eye by a lessening of distention.

Some explanation of this clinical result is furnished by the experimental work of S. Gendel and J. Fine[3] on a series of dogs, the primary object of which, however, was to show the effect of acute obstruction on the blood and plasma. They used four types of dogs: (i) intact dogs (controls) under continuous intraperitoneal anæsthesia with "Nembutal", (ii) dogs with obstruction but no distension, (iii) dogs with obstruction and distension, and (iv) dogs with obstruction, distension and strangulation. The second group had the pylorus and terminal portion of the ileum closed with a closed cannula in the distal portion of the ileum. In the third group the cannula was connected to a "Perusse" pressure bottle and the bowel was kept inflated. In the fourth group greater inflation pressure was used, which caused venous congestion, mucosal degeneration and extravasation of blood and plasma into the lumen, mesentery and peritoneal cavity.

Gendel and Fine came to the following conclusions:

1. Dogs with intestinal obstruction die more rapidly if distension is present, and if strangulation is superimposed on distension then death occurs even more rapidly.

2. Distension *per se* does not cause a loss of fluids into the intestinal lumen, bowel wall or peritoneal cavity.

3. Distension, however, is the central disturbing agent in uncomplicated obstruction.

Though most of their findings have to do with plasma loss, to which I shall refer later, Gendel and Fine point out that in clinical practice it is all too clear that some vital factor in the results of obstruction awaits clarification. Confirmation of the intoxication theory seems remote. The importance of noxious nervous stimulation cannot be ignored,[4][5] though the evidence regarding it is conflicting.[6] They go so far as to assert that if the complicating features of strangulation and peritonitis are excluded from consideration, unrelieved obstruction remains a lethal disease in spite of the effective control of electrolytic imbalance and dehydration.

But it is generally agreed that restoration of normal tension by enterostomy or intubation and suction will bring the patient's clinical condition back to normal, provided that it has not reached an irreversible stage and the deficiency in water and electrolytes is corrected.

The method of intubation and suction by the Miller-Abbott tube is held by Abbott[7] to be both therapeutic and diagnostic: (i) it empties the bowel and restores peristalsis; (ii) it supplies data for the adjustment of fluid and electrolyte balances; (iii) it relieves obstruction; (iv) it enables the site and nature of obstruction to be identified; (v) it simplifies surgical intervention; (vi) it protects any suture line post-operatively; (vii) it converts an urgent operation into an elective surgical procedure.

The technique is as follows:

The tube consists of a rubber tube for aspiration and a very fine rubber tube to inflate a fine rubber balloon. It may consist of the two tubes joined, or the smaller may be incorporated within the lumen of the larger. It is best passed by the nose. The balloon is not inflated till it reaches the duodenum. One can tell when this occurs by the resistance to the syringe plunger as the first ten cubic centimetres of air are injected into the balloon and the walls of the duodenum afford resistance. If well placed the balloon will then advance rapidly. When the bowel is emptied, 50 to 100 cubic centimetres of dilute barium sulphate may be given so that a radiograph may be taken; afterwards the barium sulphate is immediately withdrawn. To withdraw the tube the balloon is deflated and the tube is taken out at the rate of six inches every few minutes.

Taken in all, this is a time-consuming procedure.

Replacement of Lost Chlorides.

Symptoms in obstruction are caused by some powerful toxic agent which quickly develops, and it has been proved also that this toxic agent destroys protein at a rapid rate, as is shown by greatly increased nitrogen excretion which is usually coincident with an increase in the non-protein nitrogen of the blood.[8] This has been well shown by Haden and Orr, whose findings are given in Table I.

TABLE I.

Showing Increased Nitrogen Excretion Coincident with an Increase in the Non-protein Nitrogen of the Blood.

Day.	Dog with Obstruction.[1]		Normal Dog.[1]	
	Chlorides. (Milligrammes per 100 Cubic Centimetres.)	Carbon Dioxide Combining Power. (Volumes *per centum*.)	Chlorides. (Milligrammes per 100 Cubic Centimetres.)	Carbon Dioxide Combining Power. (Volumes *per centum*.)
1	420	40	450	26
2	340	57	470	29
3	420	50	460	34
4	300	48	490	40
5	280	62	470	44
6	250	75	560	39
7	360	77	490	32
8	210	66	490	44

[1] All dogs were fasting, but were given fluid.

But by their findings the fundamental change in obstruction is a fall in the chloride content and a rise in the carbon dioxide combining power of the plasma. A rise in non-protein nitrogen content does not occur until a pronounced depletion of the chlorides has taken place. This would seem to be first a loss or a fixation somewhere of the chlorine ion, the sodium ion being left free to combine with carbon dioxide and to circulate as sodium carbonate—hence there is an increase in alkali in the blood.

The changes in the chloride metabolism are the most striking features of the intoxication of obstruction. The chlorides are first affected and are lost or used up in some manner. This depletion of chlorides is probably related to the increased protein destruction, while the most obvious explanation of their disappearance would be a loss by vomiting. But the same blood changes occur in the absence of vomiting; moreover, the total amount of chloride excreted in the vomitus and urine is low. It seems possible that the chlorides may be used up in the course of the increased tissue destruction. There may also be an attempt to protect the body protein by a change in reaction, since autolysis is not so active in alkaline media, and it is possible that the toxic agent may act through autolysis. And lastly, the possibility that the chloride may play a directly protective part must be considered.

When one comes to consider fluid balance and its maintenance, one must take into account the amount the patient is capable of taking by mouth, and the fact that there is a danger in giving large amounts of glucose or saline solution while the patient is in a condition of shock. In the use of fluid,[9] the important point is that possibly harm may result from the administration of saline solution and practically none from the administration of glucose, because of the relation of sodium chloride to œdema; and one does not want to cause the œdema of salt on top of the œdema of trauma. In cranial surgery the use of glucose in saline solution is best limited to the period of operation during which there is much loss of sodium chloride. Salt should be used only when the serum electrolytes are depleted by prolonged vomiting or diarrhœa, and then only in small amounts.

In ordinary surgery[10] a moderate excess of fluid may be given post-operatively with impunity, but for prolonged use 5% glucose in distilled water is better than in saline solution.

Beard and Blalock[11] demonstrate that the composition of the blood of dogs suffering from continuous trauma to the intestines (shock) results from alterations in the fluid lost by copious weeping from the peritoneal surface. This fluid has the same protein content as blood plasma, so that the result is protein loss and consequent diminished osmotic pressure of the blood.

The same investigators then noted that the continued administration of 0·9% saline solution was followed by a decrease in the total volume of blood plasma, so that the total amount of protein in the blood stream was reduced to one-half of the original. With 3% and 6% saline solution the results were the same, so little may be expected from the treatment of shock due to loss of blood plasma by the use of physiological salt solution. If on the other hand shock results from injury, saline solution may give some benefit if not pushed for too long.

But saline solution must be given when there has been an abnormal loss of fluid containing sodium chloride—for example, in the presence of diarrhœa or vomiting, or intestinal fistula; otherwise the deficiency of sodium and chloride ions brings about weakness, nausea, dehydration, stupor *et cetera*, which is the same thing as shock. Patients also lose important amounts of sodium chloride by duodenal suction.

In general there is less sodium chloride in intestinal secretions than in physiological salt solution or Ringer's solution, so it is necessary in duodenal suction to give up to one litre of saline or Ringer's solution, with glucose, each twenty-four hours. This will bring the concentration of blood chlorides to normal. Long-standing sepsis also reduces the plasma chlorides, as does malnutrition (for example, in carcinoma of the bowel); but there is an inability in these instances to assimilate the sodium chloride, so it is useless to give it. As has already been indicated, post-operative œdema (internal) is frequently initiated by the administration of too much saline solution. The giving of glucose is a different matter, for it supplies only water and carbohydrate.

Water Requirements.

According to Maddock, the daily water requirements are as follows:

In uncomplicated cases:

For vaporization ..	1,000 to 1,500 cubic centimetres
For urine	1,000 cubic centimetres
Total	2,000 to 2,500 cubic centimetres

In complicated cases (sepsis, hyperthyreoidism, hot humid weather *et cetera*):

For vaporization ..	2,000 cubic centimetres
For urine	1,000 to 1,500 cubic centimetres
Abdominal losses (vomitus *et cetera*)	+
Total	3,000 to 3,500 + cubic centimetres

It may be noted that the old phrase "toxic suppression of the kidney function" has a simpler reason, for little or no urine means that there is little or no available water.

Glucose provides food for energy as carbohydrate; this affords protection for the liver. It also prevents ketosis, and 50 grammes per day are sufficient for this purpose for the normal adult. A 5% solution of glucose in distilled water is nearly isotonic, and practically all the glucose is retained when patients are given three litres per day of this solution. A 10% solution of glucose is hypertonic to blood and causes phlebitis at the site of administration; but this glucose is also retained by the patient, so that when there is a need for more than a moderate amount of carbohydrate (for example, in the presence of liver damage, severe hyperthyreoidism, malnutrition and cachexia), the 10% solution is particularly valuable. If it is given more slowly than the weaker solution at a rate of 200 cubic centimetres instead of 300 cubic centimetres per hour, there is less glycosuria during its administration.

It has been estimated[12] that 15 pints of fluid are absorbed daily from the ileum and colon and lost by way of the rectum, kidneys, lungs and skin.

In the treatment of paralytic ileus "Neo-Synephrin hydrochloride" (Stearns), the action of which is allied to that of adrenaline but more prolonged, produces a rise in blood pressure when infused continuously into veins (20 cubic centimetres of a 1% solution to each litre of infusion fluid). It affects the same capillary beds as are dilated by toxins of bacterial and metabolic origin, as well as by histamine.

I shall turn back here to the work of Gendel and Fine as an elaboration of our present conceptions of the necessity for replacing lost salt and fluid. Among findings not already quoted, these results may be noted:

1. The average normal plasma and whole blood volume were found to be 5% and 8·8% of body weight respectively. Plasma volume was 56·8% of the whole blood volume.

2. Distension of the obstructed intestine causes an early and progressive loss of blood plasma. This loss of plasma volume reaches 55% within twenty-four hours; it is equivalent to a loss of 3·1% of the body weight, when a loss of 2·38% of body weight in terms of plasma is sufficient to cause death. Of the 3·1% loss, 0·7% is due to dehydration; the rest, 2·38%, is due solely to the deleterious effect of the distension on the general circulation.

3. When strangulation is added to obstruction and distension a 48% loss of plasma occurs in four hours. This suggests that strangulation and obstruction in the absence of peritonitis cause death sooner than simple obstruction, not because of a difference in the phenomena involved so much as because of a difference in the rate of loss of plasma.

4. The magnitude of the plasma loss due to distension alone indicates that the all-important immediate decompression of the gut must be accompanied by an administration of adequate quantities of plasma. The volume of plasma necessary to restore the normal plasma volume is far in excess of the amount commonly given in clinical practice to patients suffering from obstruction. The use of whole blood has disadvantages which make the use of plasma preferable.

5. The intravenous administration of fluids and electrolytes is necessary, but not so vital as that of plasma.

6. The mechanism by which distension causes loss of plasma is not clear. That it is not because of a loss of fluids into the intestine and peritoneum (unless strangulation supervenes) is certain.

Summary.

1. The value of duodenal and intestinal suction in obstruction and ileus is outlined.

2. Decompression by suction does not obviate the necessity for prompt operation in mechanical obstruction.

3. A fundamental loss in obstruction is chloride loss, and the chloride lost must be restored.

4. Salt should be used only when there is great chloride loss by vomiting or diarrhœa, and then only in small amounts.

5. The water requirements in fluid loss are indicated.

6. The administration of glucose, a very safe procedure, is described.

7. Recent work on loss of blood plasma promises an advance in the "replacement treatment" in intestinal obstruction.

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SOME MEDICAL ASPECTS OF CRIME.

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IF it is granted that the function of medicine is to care for the health of the community, the question of crime is one which we—the medical profession—cannot afford to ignore. With advance in the understanding of psychology, it has become impossible for us to separate man's physical needs from his mental and moral needs, or to hand the latter over light-heartedly to a spiritual adviser, while reserving to ourselves nothing but his mere anatomy and physiology. We now realize that a human being is an entity, complex but indivisible. He cannot be healthy in any true sense of the word unless he is entirely healthy. The single criminal is an unhealthy individual; the criminal multiplied becomes crime, an illness of society.

Our penal code—which constitutes the "treatment" prescribed for this illness—should therefore receive some attention and analysis. First, what is its purpose? Is it intended to serve (*a*) as a form of revenge, (*b*) as a deterrent or (*c*) as a reformative system? The idea of vengeance we may regard as dead in the more civilized communities—otherwise torture would still be fashionable. If we really believed that punishing one man stopped another from committing the same crime, we should still execute our murderers in public and hang their bodies in chains at our busiest cross-roads. But every intelligent person knows that crime is a curiously "catching" disease, and that one brutal offence against society, followed by a notorious trial and execution, far from acting as a deterrent, often leads to a series of similar offences; and it has constantly been demonstrated that the harsher the criminal code, the greater the crop of criminals.

This seems to leave reformation as the only purpose of our penal system; but upon analysis of prison experience

the interesting suggestion emerges strongly that punishment does not reform the criminal. The inquiring medical man is thus left facing the fact that the present treatment of this illness is a failure. The patient is not recovering.

What other line of treatment can be tried? Let us assume that the question of handling criminals is not one for judges, lawyers, members of parliament and governors of gaols, but for the medical profession in general, and for the psychiatrist in particular.

What sort of creature is the criminal? Is there such a thing as the "criminal type", or is he just an ordinary human being, generally a little "below par" in intelligence and bodily health, who has revolted against an environment that is too hard for him? Investigators agree that the great majority of criminals have very similar backgrounds. The average specimen is the child of poor parents; he has had an indifferent education; he is not quite up to normal intelligence; he has left school at the earliest possible age to try to earn a living under the harshest conditions. He probably got into trouble and appeared before a juvenile court; the first time he was reprimanded, the second time he was put on probation, and the third time he was sent to a juvenile prison, from which he graduated as a full-blown criminal.

A modern creative writer in "The Grapes of Wrath" makes one of his characters describe the process with masterly insight:

> He done a little bad thing an' they hurt him, caught him an' hurt him so he was mad, an' the nex' bad thing he done was mad, an' they hurt him again. An' purty soon he was mean-mad. They shot at him like a varmint, an' he shot back, an' then they run him like a coyote, an' him a-snuffin' an' a-snarlin', mean as a lobo . . . he wasn't no boy nor no man no more, he was jus' a walkin' chunk a mean-mad . . ."

It would seem, therefore, that there is nothing accidental about the making of the average criminal. Through the whole history of medicine the discovery of causes has been the essential preliminary to the discovery of cures, and here we have a fairly clear indication of causes to work upon—a poor inheritance, a bad education, a bad environment. We shall not cure this illness by treating its individual symptoms—its thefts, murders, rapes and so on—any more than we should cure a duodenal ulcer by frequent doses of opium.

That the most important factor of the three mentioned is environment is suggested by the repeated observation that the incidence of crime (especially crimes against property, which comprise 80% of all crime) rises and falls with the rise and fall in the price of food. It also increases when there is mass unemployment, during widespread strikes and lockouts, and in the winter. Crimes of violence increase after war. In other words, where the environment is harsh, the weak are driven to anti-social acts. (In this connexion a recent investigation in Melbourne is of interest; it was found that in proportion to population the inner suburbs produced five times as many juvenile offenders as the outer.)

By examining the present régime of treatment for criminals we may arrive at some understanding of just where and how it fails, and to do this a brief sketch of some features of the English penal code may be given, because it is the foundation of our own.

In England, about a hundred and fifty years ago, a boy of nine was condemned to death and executed for stealing three pennyworth of paint; an appeal was made to the House of Lords, but it was dismissed, the bishops without exception upholding the sentence on the ground that to show mercy would be to encourage wrong-doing. At that time there were nearly 200 crimes punishable by death; and yet the tide of crime was ever rising, until the prisons and the hulks—in spite of an appalling death rate—had to overflow in transportation to Australia. Looking back, we can easily see that brutal punishments made brutal criminals, and that the brutal punishments were the outcome of an attitude of mind—an attitude just changing to the conception of punishment as a deterrent, but not yet entirely freed from the older conception of revenge, and still completely dominated by the idea of the essential inferiority of the "lower classes".

Wilberforce, speaking of the labouring class, asks: "Could they not see that their lowly path had been allotted to them by the hand of God, that it is their part faithfully to discharge its duties, and contentedly to bear its inconveniences?" "Inconveniences" seems a masterpiece of understatement, when we remember that at this time women stripped to the waist were hauling trucks of coal in the mines for fifteen hours a day, and children of five and six were working fans for the same hours. What Wilberforce and his friends (in many ways the most enlightened men of their period) failed to realize was that such conditions, coupled with harsh and revengeful laws, were producing that steadily increasing flow of criminals which was becoming such an embarrassment to the Government.

Bentham's suggested solution of the problem was to put the entire labouring class into "industrial houses", where work, recreation, education and marriage would be exactly regulated; such workers as got into the prisons were to be "ground" into industrious habits and respectfulness to their betters. To help this "grinding" process they must work at laborious, uninteresting and useless tasks; they must be fed with a minimum of the most repulsive food; they must never speak to each other; they must have solitude to consider their evil ways and repent. With such a discipline, he felt, the prisoner was sure to emerge sober, upright, frugal, provident and respectful. Despite this admirable régime, however, the prisoners, to the surprise and grief of their betters, did nothing of the sort; so Samuel Hoare (ancestor of Mr. Chamberlain's Cabinet Minister) improved it by introducing the treadmill, which was said to be "very conspicuous in the moral benefits resulting to the prisoners". But still (such was their recalcitrant spirit) it could hardly be said that they were sober, upright, frugal, provident and respectful; and in 1833 William Crawford (inspector of prisons) went to America, returned, and reported favourably on the experimental prisons of Pennsylvania, where the solitary system was being tried. (It is interesting to note that though the official mind was full of enthusiasm for this system, the imaginative and creative mind, as represented by Dickens in his "American Notes", was filled with horror.)

In 1844 Pentonville model prison was opened. From a central hall which was the hub, double rows of cells radiated outward like spokes; from the hub any contact between prisoners would be visible. Each prisoner had his own cell in which to eat, sleep, work and meditate. When he left his cell he wore a mask to depersonalize him. Surely now he was removed from all pernicious influences, and could be "ground" honest! Fifty-four prisons were built on this model in the next few years; but in spite of these continued improvements the tide of crime still rose. Also it was found that more frequently than ever prisoners had outbursts of violence, went mad, committed suicide. Evidently pernicious influences still existed. So the crank took the place of the treadmill, in order that each prisoner might be reformed in his cell, alone with his crank, and removed from the contamination of his fellow-man.

In 1843 Sir James Graham, much in advance of his time, said: "Diet ought on no account be made an instrument of punishment." But twenty years later a committee of the House of Lords concluded that "diet may be made a just and useful element of prison discipline"—a view which, as we shall see, is still held.

In 1894 a real advance was made. The silent system was modified, unproductive labour was replaced by productive (though generally very dreary) labour, and an attempt at education was begun. But the obscene crop of "model" prisons which sprouted up all over England in the 1840's and 1850's hampered and still hampers efforts at effective reform.

In 1918 a more varied diet was introduced; since then there has been no further improvement in this direction except the addition of an ounce of cheese for tea for prisoners who have served a year.

Our own system inherits a good deal of this tradition. In dealing with long-term prisoners the division system is used; as each new division is reached there is a lessening

of the rigours of discipline, and an increase of small privileges.

"A" division consists of what is known as "separate treatment". In this division the prisoner is allowed no communication with any other prisoner; he may exercise for one hour in the morning and one hour in the afternoon. (Exercise means walking round and round a bare walled yard.) He is allowed one hour for reading "such instructive and reforming books as may be selected for him by the chaplain". All the time he is solitary, except when a warder may be near. He has some simple manual work to do. All prisoners condemned to penal servitude or to hard labour for two years or more, and those having one previous conviction of three months or more, serve two weeks in "A" division. Prisoners having two such previous convictions serve three weeks, and those with more than two convictions four weeks. Possibly this solitary beginning to their sentence is intended to allow the prisoner time for repentance and resolving to lead a better life when he gets out; it seems more likely that his mind will be filled with feelings of hopeless boredom, resentment and futility.

Having got through the two to four weeks of "A" division, he passes to "B" division, where he spends a third of the remainder of his time, but not more than two years. In this division prisoners still have separate cells, but they work in company. They are allowed to write two letters every two months, and to receive letters once in six weeks.. No tobacco is allowed. That alone seems a stupid injustice, as it makes an unnecessary difference in the severity of otherwise similar sentences. To the non-smoker it is absolutely no hardship at all, while to many men it would amount almost to torture. Also the effort to get tobacco must lead to much breaking of the rules.

In order to prevent the contamination of less hardened sinners, any prisoner may, by order of the Comptroller General of Prisons or a visiting justice, be separately confined during the whole of his sentence. No one can question the wisdom of separating what one might term the "casual" criminal from habituals; but one can question both the wisdom and the humanity of keeping any man under such "separate treatment" for long periods. To expect any change in outlook, any reawakening of "human-ness" in such conditions, is to show an utter ignorance of psychology. It is incredible that there should be only one prisoner in a gaol whose company would be bad for the more innocent.

The prison timetable is as follows:

Monday to Friday.

6 a.m.: Bell. Rise.
6-6.30 a.m.: Dress, fold bedding, tidy cell.
6.30 a.m.: 2 bells. Gaol opens, warders parade.
6.35-6.55 a.m.: Night-tub duty: to yards for sanitary purposes; clean tubs, fresh water to cells.
7 a.m.: Fall in for roll-call. March to cells taking breakfast
7.5-8 a.m.: Breakfast locked in cells.
8 a.m.: 4 bells. To labour.
8-11.50 a.m.: Labour.
11.50 a.m.: Yards for sanitary purposes.
12 noon: Roll-call. March to cells taking dinner.
12-1 p.m.: Dinner locked in cells.
1-4 p.m.: Labour.
4 p.m.: Cease labour, muster, check number, march to yards in charge of officers. In yards clean boots, wash, etc.
4.10 p.m.: General roll-call.
4.10-4.13 p.m.: Roll-call, and march to cells with evening meal.
4.13-4.30 p.m.: Tea.
4.30-5 p.m.: Search duty and lock up.
8.30 p.m.: All lights out.

Saturdays.

Same as above until 11 a.m.
11 a.m.-3.55 p.m.: In cells reading, or one hour for exercise, according to class. Exercise consists of walking in single file round yard.
3.55-4.10 p.m.: In yards for sanitary purposes. Then as on week-days.

Sundays and Holidays.

Usual routine until 8 a.m.
8-9 a.m.: Exercise.
9 a.m.: Governor's inspection.
9.30-11.30 a.m.: Exercise.
11.30-11.50 a.m.: Cells.
11.50 a.m.-noon: Yards for sanitary purposes.
12 noon: Roll call, to dinner in cells.
12 noon-1 p.m.: Dinner.
1-3.55 p.m.: Exercise.
3.55-4 p.m.: Yards.
4-4.10 p.m.: In yards for sanitary purposes.
4.10-4.13 p.m.: Fall in. Roll-call. Evening meal in cells.

It will be noticed that no time appears to be allowed in this schedule for divine service and prayers, which, of course, are held. I do not know the reason for this.

A little adding up will show that on week-days a prisoner spends sixteen hours seventeen minutes alone in his cell; for nine and a half of those hours he is in darkness. On Saturdays he spends twenty hours and twelve minutes out of the twenty-four hours alone in his cell. On Sundays and holidays (according to this time-table) sixteen hours thirty-seven minutes. It is unlikely that anything but evil can come of these long periods of enforced idleness and boredom.

Another "de-humanizing" rule is that about silence:

Prisoners will preserve strict silence at all musters, at meals, in the dormitories and cells at night, while undergoing solitary confinement, and while marching to and from their places of labour.

Visits.—Visitors are allowed (1) immediately upon conviction, and (2) at monthly intervals. The length of the visit is twenty minutes, and "an officer shall be present at every visit, and observe all that passes". Persons who have served sentences in gaols, and others of known bad character, are not eligible as visitors, and no visits are allowed on Sunday—which would seem to be an unnecessary hardship to the visitors, for many of whom Sunday must be the only convenient day.

Rations.—Rations are as follows: (i) For convicted prisoners at rest, and for prisoners on separate treatment, not subject to physical drill: bread, 16 ounces; maize meal, 8 ounces; meat, 6 ounces; vegetables, 16 ounces; rice, a quarter of an ounce. (ii) For prisoners on hard labour: bread, 24 ounces; maize meal, 6 ounces; meat, 16 ounces; vegetables, 16 ounces; rice, a quarter of an ounce; sugar, 1 ounce. (iii) For prisoners on cellular confinement: bread, 16 ounces; and water. (This last may be kept up for seven days, when there must be seven days of diet (i) before a repetition.) As 16 ounces of bread supplies only about 1,000 Calories and practically no minerals or vitamins, it may fairly be said that we still employ starvation as a punishment. Food is weighed uncooked, and the meat includes bone and fat.

There are two serious criticisms of gaol diets (i) and (ii)—the gross deficiency in vitamins and minerals, and the deadly monotony. Probably there has been no review of the diet since the importance of vitamins and minerals became known, so that attention is paid to caloric requirements alone; but there has been plenty of time for the prison authorities to think again. The monotony is probably almost as bad; every breakfast consists of bread and maize-meal porridge, without milk or sugar, and every supper is the same—bread and vegetable soup. The only variation is in the midday meal, which consists of meat, three vegetables (one always potatoes) and pudding. The meat will be one of four or five different joints changed from day to day. Where two out of three meals every day for perhaps many years are so monotonous it is likely that the health of many men may suffer severely.

Once a man is convicted he of course comes under prison discipline, and to an ordinary commonsense view it would appear that quite trivial offences, which may often be due to a perfectly understandable moment of irritation, may be punished over-harshly. Thus, on the way to the gaol "a prisoner who refuses to proceed thither on foot, or makes any affected delays in proceeding thither may be kept in solitary confinement on bread and water alone for a period not exceeding 14 days". For "profane cursing and

swearing" or "irreverent behaviour at or during divine service or prayers", the visiting justice may sentence a prisoner "to be confined in a solitary cell on bread and water for any term not exceeding seven days".

If a prisoner is guilty of repeated offences against the rules of the prison, two justices may order close confinement for one month; or if such a prisoner was convicted of felony or was sentenced to hard labour, he may be punished by "personal correction". No one now seems to know what "personal correction" is, although it appears several times in the regulations. I asked solicitors, and several of the authorities of Parramatta Gaol, and could get no answer. The general opinion is that it is a euphemism for flogging; if that is so, evidently authority was beginning to feel that such barbarities were better wrapped up in obscure wording. In any case, it is many years since flogging was used as a punishment in New South Wales, but in October, 1940, men have been sentenced to flogging in Victoria.

In this respect let me digress for a moment to quote from a leading article in *The British Medical Journal* of March 20, 1937, about the birching of children in England. Up to 1932 a magistrate might sentence a child of eight years old or more to six strokes of the birch; a higher court might order 12 strokes. When the House of Commons, in 1932, passed the *Children's and Young Persons' Act*, this punishment was deleted; but when the bill came before the House of Lords an amendment was inserted to reenact the section providing for six strokes of the birch. The Commons rejected the amendment unanimously, but the Lords insisted, and its use is on the increase. The child may wait in suspense for several days before the birching is given. Here is *The British Medical Journal's* description:

> . . . secondly the solemn and impersonal sentence is in itself harmful; thirdly the circumstances of the punishment are terrible and inhuman. The child is taken into a bare and gloomy room, his clothes are removed, and he is tied up hand and foot to a tripod after the police surgeon has examined him to see that his heart will stand the whipping. A police constable wields the birch—a heavy bundle of twigs that has been soaked in brine—and after each stroke the doctor again examines the child . . . the child is not usually fit to attend school for two or three days.

In 1935 there were two hundred such birchings. One cannot help pausing here to remark that the government of the Union of Socialist Soviet Republics, so often accused of barbarity and bloodthirstiness, has forbidden all corporal punishment in the gaols, in the schools and in the home; warders, teachers and parents alike must find a more civilized, a less psychologically dangerous discipline.

This, then, is a rough outline of the treatment by which it is hoped to cure society of the disease of crime. Why does it not do so? Why does a supposedly reformative system not produce reformation? Why do so many released prisoners soon find themselves in gaol again? A high official of the Parramatta Gaol told me that he was once absent for about six years, and that on his return there was more change among the staff than among the prisoners. These questions, I repeat, must be of vital interest to the medical profession once it has accepted crime as a manifestation of social ill health, due to the maladjustment of the individual to society.

The prison system undoubtedly has many faults, chief among which I would name the "separate treatment" at the beginning of a sentence, and the solitude of every meal. Man is a gregarious animal. Moreover, it should be remembered that the sketchier his education has been (and in the case of the average prisoner it has been very sketchy indeed), the poorer are his inner resources, and the less he is able to endure solitude. A highly educated man may not like solitude, but he is far better equipped to put up with it. Any treatment which tends to "de-humanize" a man cannot, I believe, fail to have the worst effect upon him, not only as an individual, but as a unit of that society to which he must some day return. The eating of meals alone in his cell must make him feel less a man than an animal in its cage.

Another prison custom with nothing to recommend it is the punishment often used for outbreaks of violence, due, it is recognized, to "prison psychosis", during which the victim (for he is a victim) of an uncontrollable nervous impulse starts smashing everything within reach. He is placed in a badly lighted cell, with nothing to read but a Bible (whose print was too small for me to read in that light), and with nothing to eat but dry bread. If the object of imprisonment were to produce bitter, "de-humanized", antisocial men, these three measures could not, in my opinion, be bettered; but if the object is to resocialize the men, they are not only cruel, but unpardonably stupid.

Another fault in our system of punishment is its arbitrariness; Gilbert believed apparently that the punishment should fit the crime, and that belief still too largely prevails; surely it should fit the criminal, not the crime. Men of an entirely different mental and physical make-up may commit the same crime from a hundred different causes; they all receive, in general, about the same sentence. The scientific way to deal with them would be to find out in each case the man's intelligence, his physical health, his environment, and the chain of causes which led inevitably to the crime (for nothing happens which is not inevitable). When all this is known there would be a reasonable chance of deciding correctly what treatment he should be given to enable him to become and remain a useful social being.

In my opinion the idea of punishment should altogether cease. Society, obviously, must use whatever amount of restraint is needed to protect itself from antisocial beings; but the point is that the present method, dominated by the idea of punishment, does not achieve this. One need only know of the handling of various classes of sexual criminals to see its utter futility. The criminal of this type, who is almost always either defective mentally or the victim of abnormal hormones, is tried, convicted, and sentenced to so many years in prison. Then he is released with just the same mental defect, or the same abnormal hormones, *plus* a resentment against society and an accentuation of whatever sexual twist he had before. It has been stated in the Press that one of the rapes recently committed in Victoria was by a man who had just been released from prison after serving a sentence for a previous rape, and that he has now been given a flogging and sent back to prison again. It is almost inevitable that he will emerge in due course more bitter, more brutal, and less self-controlled than ever.

Yet when a more enlightened way of treatment is occasionally tried, it may be discouraged by a higher authority, as happened recently. Again the facts of the following case are taken from the Press.

> A young man who was out on licence was convicted of stealing. The police magistrate, on a psychiatrist's opinion that the man had a mental age of twelve years, and having received undertakings, did not send him to gaol; that was a civilized proceeding. However, there was an appeal to a higher court, and at the Quarter Sessions a judge sentenced him to a year's imprisonment, remarking: "He does not appear to be subnormal to me. He appears just the reverse." No second medical opinion was sought; His Honour from the bench can accurately gauge the mentality of the prisoner in the dock.

If this young man really has a mental age of twelve, a year in gaol will certainly return him to society a much worse menace than he is now.

Obviously these persons need medical treatment. If cure is possible, they become useful citizens; if not, they must be restrained permanently, but with as little hardship to themselves as may be. Undoubtedly medicine owes it to the community to protest against the continuance of the dangerous farce of the "punishment" of sexual offenders.

The application of prison regulations may sometimes, however, be more humane than their conception. The following account is based on a visit to Parramatta Gaol. Here prisoners who have served one year are allowed to spend 1s. 6d. a week on groceries such as cheese, jam, and butter, on tobacco (two ounces a week), or on writing materials or books. "Habituals" and long-sentence

prisoners, after serving a proportion of their sentence, may spend 7s. 6d. and smoke four ounces of tobacco a week; they may also have their cell lights on until 10 p.m.

A prisoner may take up a special course of study, and any books that he may need he may buy if they are not in the prison library. This library has many excellences; the fiction and educational sections each contain over 2,000 volumes, and in addition there are French and religious sections, magazines and dictionaries. Books may be changed four times a week. The chief criticism of the library seems to be its lack of modern books; in fiction the classics of the Victorian era take up too much space, and anything published since the last war is rare. The same may be said of the educational section. The fault is slightly offset by copies of *The Reader's Digest* among the magazines. I talked for some time with the librarian, who is serving a three years' sentence; he was obviously interested in his job, knew his library well, had a good knowledge of literature, and was very intelligent. He stressed that their greatest need was for good modern fiction, and up-to-date works on scientific, economic and political subjects; so if any reader feels moved to help in civilizing our penal system, he can send such books to the governor of the gaol.

I am not competent to give more than a tenative opinion about the workshops, but they appeared to me to be well laid out, and equipped with up-to-date machinery; besides a bakery, there were little factories for blacksmiths, tinsmiths, boot-makers, carpenters, and cabinet-makers. There is reasonable freedom for the prisoners to move about and talk while at work. Payment is by results; they do a minimum of work for their keep, and for everything over that they are paid. Any sum in excess of what they are allowed to spend is given to them on their release. One hopes that many of them use it to regain a place in society—some do not. One man was recently released with over £200 to his credit; he gathered together a small band of "good companions", had a glorious party for a couple of weeks, and then got himself readmitted to gaol.

Every Saturday and holiday a concert is given by outside performers only; prisoners are not permitted to provide for their own entertainment in any way.

The prisoner, released at last from the prison system, returns to a social system even less kindly disposed towards him than it was before. It should not need a psychologist to realize that the one chance of keeping a released prisoner from relapsing is to place him in a suitable environment—the word "suitable" being used in its most exact sense, as meaning an environment considered by physicians and psychiatrists to suit his individual needs. Instead, he almost always returns to the same one from which he came, now made harsher than ever by the fact that he is everywhere regarded with a distrust and suspicion which make it more difficult for him to find and keep employment. Incidentally, this increased stress in the business of living often falls on the criminal's dependants even more cruelly than on himself. Pushed farther down in the social scale, their confidence and self-respect damaged, if not destroyed, they join the legion of those who become a liability rather than an asset to the State which failed to take care of them.

As first steps in the reformation of our criminal code, I make the following suggestions. Every present inmate of a prison should be examined by a physician and a psychiatrist, and as a result of these findings his sentence should be reviewed, always with the aim of making him into a useful member of society. Prison routine, discipline, diet and architecture should be studied by a committee of physicians and psychiatrists with that same end in view. Every prisoner brought before the courts should be examined by a physician and a psychiatrist. When the accused is convicted, the medical members of the court should advise as to what should be done both to protect society and to rehabilitate the prisoner. It is probable that all short-term detention should be abolished, as nothing useful could be taught; certainly to shut up a "drunk" for two or three days for the two-hundredth time neither cures the dipsomaniac nor protects society.

The man detained for a longer period would go to a place very different from a modern gaol. He would have much more light and air, and a more varied diet. He would be able to move about with reasonable freedom within the institution, and a certain amount (as much as practicable) of the prison discipline would be in the prisoners' own hands—as would their entertainments. The ignorant would, of course, be educated, and all would be taught a trade under first-class factory conditions. The time of their release would depend entirely upon whether they were fit to take a useful place in society, and a suitable job would be waiting for them when they were. If this is an impossible ideal in the present social order, then there is something wrong—and it is not the ideal.

The case of Albert Andrew Moss may be taken to illustrate what can happen under our present system of dealing with the criminal of subnormal mentality. Here is a summary of his career, incredible if it were not taken from police and asylum records.

He was always regarded as subnormal by his relatives; as a youth he was "the bully of the district", and was considered to be irresponsible. In 1902, when about seventeen years old, he was sentenced to twelve months' hard labour at Dubbo Quarter Sessions for forging and uttering. In April, 1905, at Narromine, he was sentenced to three months' hard labour for stealing. In August, 1906, at Glen Innes, he was sentenced to three months' hard labour for stealing. On April 3, 1911, after being charged with stealing, he was taken by the police to the Reception House at Darlinghurst, certified to be insane, and sent to the Mental Hospital at Gladesville. Dr. Chisholm Ross stated that "his memory was affected, and he was stupid and confused". He was discharged after fifteen days.

On March 16, 1914, he was again in Gladesville Mental Hospital, and Dr. Bowker reported: "He is stupid and dull, and states that God speaks to him." He was discharged on March 31, 1914. On April 14 of the same year he was arrested at Orange for larceny; but the charge was withdrawn, as he was considered to be insane by Dr. Howse. He was playing with his fingers, looking at the sky, and saying: "The black world." He was sent to the Parramatta Mental Hospital, and discharged on May 17, 1914.

On May 23, 1917, he was arrested at Condobolin for stealing a dog, and sent to Callan Park. It is not known when he was discharged, but on May 28 he was admitted to the Reception House and transferred to Callan Park on June 11, 1917. He was examined by Dr. Cahill and Dr. Chisholm Ross, who reported: "He is quite stupid and helpless." He was discharged on October 5, 1917.

On May 23, 1918, he was arrested at Cobar for having stolen goods in his possession, and fined £1 or fourteen days' hard labour. On August 20, 1918, he was charged at Cobar Quarter Sessions with stealing and failing to appear; he was in the Reception House, having been admitted on the previous day. He was certified insane and sent to Callan Park. He escaped from there, and as he was not captured within 28 days, he was discharged. On December 30, 1918, he was taken to the Reception House, certified insane, and transferred to Gladesville, where Dr. Chisholm Ross reported: "He speaks perfectly well, is sensible, and remembers well recent happenings." He was discharged on May 15, 1920.

On May 4, 1921, he was admitted to Parramatta Mental Hospital, and discharged on November 3, 1922. On May 1, 1923, he was arrested at Yass for stealing, and was fined £2 or one month's hard labour. On March 19, 1924, he was admitted to the Reception House, after having been arrested for drunkenness, and was discharged two days later.

On September 5, 1924, he was arrested at Newtown for offenseive behaviour, taken to the Reception House, certified, and sent to Gladesville Mental Hospital. (The offensive behaviour was trying to lure two little girls into a cemetery.) He escaped on January 2, 1925, and after twenty-eight days, was discharged. Dr. Ross and Dr. Gibbs reported that he was "dull, stupid, mentally incapable", and that he had "vague delusions that he was persecuted by the police, who told him that he had to die, and they were going to shoot him".

On September 19, 1925, he was admitted to the Reception House, and discharged in four days. On December 10, 1925, he was admitted to the Reception House from Sydney Hospital with a diagnosis of epilepsy resulting from cerebral syphilis. He was discharged in four days.

On January 11, 1926, he was arrested for "assault with intent to commit rape" on a girl of twelve. He was taken

to the Reception House, and was later certified and sent to Parramatta Mental Hospital. Dr. Ross stated that he had an intelligence quotient of 77 and a mental age of nine years, diagnosed his condition as "borderline deficiency", and said that he was of uncertain behaviour with sudden outbursts of violence. Dr. Gibbs stated that he was "dull and stupid and defective in memory, and there was positive evidence of a criminal assault on a girl at Pymble". There was some suggestion that he was feigning madness. He escaped on January 5, 1933.

On March 31, 1934, he was arrested for stealing, and was fined £15 or thirty days' hard labour. On May 11, 1934, he was arrested at Narromine for stealing, and was sentenced to a fine of £10 or twenty days' hard labour. On November 29, 1934, he was arrested at Campbelltown for robbery, taken to the Reception House, certified as insane, and sent to Gladesville. Dr. Barry reported: "He is not nearly as mad as he pretends to be, but he is a dangerous criminal." He escaped on March 23, 1937, and as he was not recaptured in 28 days he was discharged. On September 14, 1937, he was arrested at Wentworth for sheep stealing, and was sentenced to three months' hard labour. On January 19, 1938, he was arrested at Broken Hill for stealing. He was certified as insane and admitted to Orange Mental Hospital, and discharged on September 15, 1938.

Between December 13 and 16, 1938, he murdered Bentley. Probably on December 18, 1938, he murdered O'Shea. About January 21, 1939, he murdered Robinson.

On June 7, 1939, he was received at the State Penitentiary, Long Bay, and was under medical observation. On November 10, 1939, it was reported: "There is not and has not been since June 7, 1939, any evidence of insanity." On November 23, 1939, the Inspector-General of Medical Hospitals reported: "There is no doubt that . . . he assumed the symptoms of insanity to serve his own purpose. . . . It must be concluded that he is of abnormal mentality. The abnormality consists of moral degeneracy associated with a fair degree of intelligence. . . . He is, however, a moral degenerate to an extreme degree. The crimes which he committed indicate a lack of control over his acquisitive instincts which impelled him to sadistic actions out of all proportion to the property gained."

That should be a disturbing history to the medical profession. Here was a man who, during his whole lifetime, was a nuisance, an expense and finally an appalling danger to the community. It is impossible to estimate what harm he may have done quite apart from the crimes and misdemeanours which appear in the official records. The warning that he was likely to become a menace appears when he tried to lure the little girls into the cemetery, and on January 11, 1926, it is heavily underlined with the attempted rape, after which he was restrained for seven years. But when he was recaptured after his escape (the number of his escapes gives food for thought) he was treated as light-heartedly as ever.

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Reviews.

ANATOMY OF THE FEMALE PELVIS.

GYNÆCOLOGISTS and anatomists will remember the important contribution by F. A. Maguire entitled "A Critical Survey of the Anatomy of the Female Pelvis Based on Sections and Dissections of Sixteen Female Pelves", which was published in this journal in 1927. The dissections and sections which were shown at many medical gatherings called forth much admiration, and the publication of pictures of them in this journal was greeted with satisfaction. These sections and dissections have been used as a basis for thirty-five illustrations that Dr. Maguire has introduced into the third edition of his "Anatomy of the Female Pelvis".[1] The present illustrations are line drawings and depict the structures with unusual clearness. So that they may be used in conjunction with the photographs reproduced in this journal in 1927, the numbers used in that publication have been retained; others have been added where they have appeared to be necessary.

The book is divided into twenty-one chapters. The last two deal with applied anatomy and the physical examination; the others deal with the anatomy of different structures in the pelvis or with parts of the pelvis itself. Thus separate consideration is given in turn to the pelvic wall, the muscles of the pelvis, the pelvic fascia, the urogenital diaphragm, the vulva, the pelvic viscera in general, the pelvic peritoneum, the pelvic connective tissue, the pelvic blood vessels and lymphatics, the supports of the uterus, the uterus, the Fallopian tubes, the ovaries, the vagina, the genital organs in relation to the reproductive epoch of life, the structures between the layers of the broad ligament, the lower urinary passages, the lower bowel and the ischio-rectal fossa. The description in each of these chapters is clearly and simply written, and references to the illustrations are frequently made. The result is that the book is not only of use to the student making his first acquaintance with the intricacies of that "elaborate affair" which is the female pelvis, but may be used in the armchair by any practitioner who has a visual memory and wishes to revise his knowledge of the peculiar characteristics of the female pelvic structures.

The last two chapters on applied anatomy and the physical examination, already mentioned, complete the book in a useful fashion. To some extent they overlap. For instance, the remarks on the rectum in the chapter on applied anatomy are really part of the physical examination; but this does not matter and none but a carping critic could object. The book is well produced and should be of the greatest value to practitioners and students alike. The index is small but adequate.

RADIOGRAPHY OF THE HEART.

AN "Atlas of Cardio-Roentgenology", by Hugo Roesler, is based on an enormous amount of original work and stresses the changes in the form or structure of the heart, great vessels and the lesser circulatory structures as revealed by X-ray examination.[2] The author insists that the clinician should supply full details of the case to the radiologist so as to allow of examination in special positions in order to demonstrate the possible lesion present. An exposure of one-twentieth of a second at six-foot distance for the antero-posterior view and four feet for the oblique views is recommended. Skiagrams should be made with the patient comfortable and not in deep inspiration. In all the cases illustrated the patients were examined by electrocardiography, by clinical methods, by radiography and by post-mortem examination. The mediastinal contents were removed *in toto* and the heart chambers and great vessels were stuffed with cotton wool soaked in formalin. Slits are usually necessary for packing in the aortic arch and left atrium. Several days later the specimens are cut and examined in conjunction with all the other clinical material available. The usual positions assumed for examination of the patient are the postero-anterior, the right anterior-oblique and the left anterior-oblique. In addition, fluoroscopic examinations are made with the patient in the left posterior-oblique and the right posterior-oblique positions. The illustrations of the skiagrams and of the injected and dissected specimens are far in advance of any previous work seen in this branch of medicine. It is impossible to consider in detail the cases reported in the work, but practically every class of cardiac disease is dealt with. Electrocardiograms accompany each case report and skiagram.

As stated in the title, this colossal work is an "atlas", and as such does not lend itself to detailed review. It should be of the greatest help to cardiologists and to radiologists who are engaged largely in cardiac work.

[1] "The Anatomy of the Female Pelvis", by F. A. Maguire, C.M.G., D.S.O., V.D., M.D., Ch.M., F.R.C.S., F.R.A.C.S., F.R.C.O.G.; Third Edition; 1940. Australia: Angus and Robertson. Demy 8vo, pp. 172, with illustrations. Price: 10s. 6d. net.

[2] "Atlas of Cardio-Roentgenology", by H. Roesler, M.D., F.A.C.P.; 1940. Baltimore: C. C. Thomas. Crown folio, pp. 138. Price: $8.50 post paid.

The Medical Journal of Australia

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WOUNDS OF THE PERIPHERAL NERVES, RESUTURE AND REGENERATION.

ALL who have any experience of the subject will agree that there is no more difficult branch of war surgery than that concerned with the gunshot wounds of the peripheral nerves. From the point of view of the injured soldier there is none more important; when main vessels are injured the fate of the limb is generally known before much time has elapsed, but when nerve trunks in the limb are involved in the wound or are close to it the period of uncertainty in regard to function is much longer. After the war of 1914-1918 the Medical Research Council of Great Britain thought so seriously of the subject that it appointed a special committee to investigate injuries of the nervous system and a special report was subsequently issued. When a peripheral nerve is involved in a wound it may or may not be clear whether the continuity of the nerve has been destroyed. If the nerve has been severed, a decision regarding resuture has to be made; if the nerve is contused some time must pass before the possibility of recovery can be determined. If resuture is necesary the method of and time for suturing are subjects of equal importance. Three valuable contributions from the University of Oxford bearing on these aspects have recently been published and are of such value that they should be brought to the notice of Australian practitioners.[1]

Hugh Cairns, formerly of Adelaide and now Nuffield Professor in the University of Oxford, and J. Z. Young contribute the first article which deals with the general subject of the treatment of gunshot wounds of peripheral nerves. They point out almost in their first sentence that the nerve injuries of war differ from those of peace in that immediate suture of a divided nerve is almost never possible, owing largely to infection. The bad results of nerve suture in septic wounds are held to be due to the extensive formation of connective tissue in the structure of the nerve itself and in its immediate surroundings. Whether chemotherapy applied to wounds will make immediate suture possible remains to be seen; Cairns and Young think that it may. Of this most surgeons will probably be sceptical. It is often impossible to assess the extent of the damage to a nerve in a gunshot wound. Spontaneous recovery often takes place; Cairns and Young quote Foerster's results. He found that among 3,099 cases there were 1,320 in which recovery was complete and 660 in which partial recovery occurred without operation. In the face of such claims it would be foolish not to allow a fairly lengthy waiting period to elapse before any attempt was made to aid recovery by operative interference. The committee of the Medical Research Council in 1920 thought that operation should be undertaken after two months if the lesion remained complete in spite of adequate conservative treatment. Cairns and Young quote Foerster as advocating (with certain reservations) delay for four to six months; they think that when spontaneous recovery is going to occur, some signs to suggest recovery will be present in most cases before six months. They are also definite in the statement that the results of nerve suture show that the period of waiting should not be extended beyond this. The subject is one of considerable difficulty and it is impossible at present to make any dogmatic statement about it. As Cairns and Young remark, it is not known whether the power of regeneration persists indefinitely in the central stump or whether the peripheral stump is at all times equally able to receive new fibres. They refer to clinical observations suggesting that peripheral conditions are important and hold that the contention of the Medical Research Council committee that "the interval between the wound and the operation has no influence on the time taken for recovery" implies no recognition of the importance of the changes that take place in the peripheral stump, end-organs and muscles. It is inevitable that nerves will occasionally be resected when they might recover spontaneously, and it is probably true that "there is always a tendency, in switching from the nerve surgery of civil life to that of war, to be too radical at first". We do not propose to follow Cairns and Young in further detail, but would merely mention their reference to the need for physical treatment for a year or more after resuture, to the difficulty that may arise when a decision has to be made between neurolysis and nerve suture, and to the need for a "follow-up" of the patients for at least three years. Beyond these questions their paper is an admirable introduction to the one that follows by Young and P. B. Medawar.

Young and Medawar write from the Department of Zoology and Comparative Anatomy of the University of Oxford. They report experimental work that promises to make possible a notable advance in nerve surgery. They deal with what they call the fibrin suture of peripheral nerves. It will be apparent to anyone who has even considered the end-to-end suture of a nerve trunk that seldom, if ever, will the cut ends be brought together without some disorganization or infolding of the fibres. In Young and Medawar's method, which so far has been carried out only in rabbits and dogs, the stumps of the nerves are held together by concentrated coagulated blood plasma. The ends of the nerve are coapted and around them is poured plasma with which a little strong tissue extract has been mixed. After an interval of from half a minute to two minutes, according to the age of the plasma and the strength of the extract, the plasma clots

[1] *The Lancet*, August 3, 1940.

to a firm jelly which sticks to the nerves and holds the stumps together. Young and Medawar state that the plasma is freely permeable and that during the subsequent days it is dissolved away, although it remains long enough to allow a firm union to be established between the divided ends. In describing their method, they explain that the gel formed by ordinary plasma is not sufficiently strong to maintain union under tension, but that it can be fortified by the solution in it of sufficient fibrinogen to increase its normal concentration by anything up to ten times. In the experiments so far undertaken plasma from cockerels has proved to be more satisfactory than that of mammals. The tissue extract that is used is obtained from chicken embryos. Young and Medawar point out that when the plasma is applied *secundum artem* little or no plasma penetrates between the cut stumps and no barrier to regeneration is presented. What is equally important is that no detectable response corresponding to sensitization was seen in their experiments and the rabbits remained apparently normal. A most striking demonstration of the results obtained is shown in two figures that are reproduced. In one the right sciatic nerve of a rabbit is shown after it had been divided and joined with plasma twenty-five days previously. It is seen that the nerve fibres have grown forwards with very little deviation except at the edges. In the second figure the left sciatic nerve of the same rabbit is shown, but in this instance junction had been affected with fine silk sutures. Here the stitches are shown to have interrupted the outgrowth and the pressing together of the ends has produced whorls and deviation of bundles. At this point it is of interest to note some observations of Cairns and Young on the subject of funicular apposition. They point out that there is no clear agreement about the importance of the maintenance of correct funicular apposition after suture. They go on to remark that since there is no evidence that either sensory or motor end organs specifically attract their appropriate fibres, it seems probable that correct functional connexion is obtained only by chance outgrowth of new fibres into channels which lead to end-organs similar to those with which they were originally connected. If this is so, they regard it as not surprising that functional recovery is seldom complete; it is more surprising that any satisfactory recovery takes place at all and it is not to be wondered at that nerves with a purely motor function recover better than those with mixed functions. "In the central stump each axon branches many times, and there are far more fibres in the regenerated peripheral stump than in the central end. . . . Probably this branching is an important factor in functional recovery; it ensures that some fibres at least reach appropriate destinations."

Turning again to the two figures already mentioned, we can, even if it is true that correct functional connexion is obtained only by chance outgrowth, appreciate at once the advantage of a junction effected by plasma in what is practically an end-to-end fashion over a junction secured by suture in which whorls and deviation of bundles occur. However careful a surgeon may be in his use of a suture needle, it seems very unlikely that he will be able to secure the same end-to-end result that is shown here to be possible with plasma. Young and Medawar also show that the fibres grow slightly faster across a junction effected by plasma than across a sutured union.

In the third paper from the University of Oxford on nerve regeneration J. Z. Young, W. Holmes and F. K. Sanders report the result of investigations showing the importance of the peripheral stump and the value of nerve grafts. They show that while new fibres grow out from the central stump of a divided nerve, an outgrowth, just as vigorous and consisting of Schwann cells, takes place from the peripheral end. Such peripheral proliferations often grow centrally as broad strands of tissue which join up with the central stump. Young and his collaborators found that the Schwann cells grow best when they have some support; at the same time it is not clear why this outgrowth takes place. They state that it remains uncertain how far such proliferations assist in the regeneration of human nerves, and they make the acceptable suggestion that the proliferations may offer one explanation for the spontaneous recovery of a large proportion of nerve injuries. This suggestion would, of course, be very difficult to prove. From this point Young, Holmes and Sanders go on to deal with nerve grafts and describe their experiments with autografts, predegenerated grafts, homografts and so on. These should be studied by those who are specially interested. Nerve grafting has been carried out with success by such workers as Ballance and Duel. From such successes as these Young and his co-workers conclude that small nerves may make better grafts than larger nerves, and that a cable graft of several thin strands is probably better than a single thick graft; the concentrated plasma method is specially useful for the preparation of cable grafts.

No attempt has been made here to review the methods of nerve suture at present in use; mention has not therefore been made of the tissue prepared from amniotic membrane, first described by Penfield, of Montreal, and used for the prevention of adhesions in operations on cerebral tissue, on nerves or on tendons. If a plasma technique suitable for use in human surgery is evolved, as will probably happen before long, it seems doubtful whether tissue for the prevention of adhesions will have to be used. When such a technique is elaborated the point will soon be decided and without much difficulty. Apart from all these practical considerations, however, the work here reported from Oxford should give a stimulus to research in the growth and functioning of nervous tissue.

Current Comment.

A DISORDER SIMULATING PULMONARY TUBERCULOSIS.

THERE was a time when the von Pirquet reaction was regarded by many as irrefutable evidence of tuberculous disease. The combination of a von Pirquet reaction and symptoms relating to the respiratory tract was regarded as diagnostic of pulmonary tuberculosis. Such a means of diagnosis would be scorned by most medical practitioners of today; they would rather pin their faith to a radiologist's report. Radiography is the most important procedure in the diagnosis of pulmonary disease; but it may provide very misleading information if it is relied on to the exclusion of proper history taking, careful clinical examination and bacteriological, immunological and hæmatological investigation. It is no rarity for X-ray shadows to be interpreted as shadows of tuberculous lesions when indeed they are produced by some-

thing quite different. An unusual disorder simulating tuberculosis on radiological examination has recently been described by C. Frimodt-Möller and R. M. Barton.[1] They call it a "pseudo-tuberculous condition associated with eosinophilia"; in the jargon of the X-ray room it is called "eosinophile lung". The patients have many of the usual symptoms of tuberculosis, including fever, cough, expectoration, loss of weight, pain in the chest, and sometimes even hæmoptysis. Physical examination reveals signs strongly suggestive of tuberculosis. Repeated bacteriological examination reveals no tubercle bacilli. The eosinophile leucocyte count is high; the percentage may be as high as 90. The radiographic appearances resemble those of miliary tuberculosis or silicosis. The mottling is extensive and evenly distributed as a rule, and striation is usually increased. The individual shadows are about two millimetres in diameter. In the majority of cases the patients do not react to the von Pirquet or the Mantoux test. The prognosis is comparatively good. The disorder is not transient; for some of the patients have been reexamined years after the primary investigation and have been found to be in an unchanged condition.

In India, where Frimodt-Möller and Barton have been working, the commonest cause of eosinophilia is helminthiasis. The suspicion naturally arises that these patients are suffering from helminthiasis and that the pulmonary disorder is something additional. Or indeed the pulmonary disorder may be due to the passage of helminth larvæ through the lungs. Frimodt-Möller and Barton have investigated both these possibilities. In the first place they found that while many (48·2%) of the patients were infested with intestinal worms of one kind or another, the proportion was higher (64·6%) among a group of 600 patients with eosinophilia, including 175 with their "pseudo-tuberculosis". Furthermore, they noted that the incidence of intestinal helminthiasis was lower among the patients who had a very high eosinophile cell count. They mention Löffler's syndrome, in which there is a fleeting pulmonary infiltration associated with eosinophilia, and they point out that several observers have suggested that this syndrome may be a manifestation of the passage of ascaris larvæ through the lungs. Müller indeed was able to produce the syndrome in himself by eating material contaminated with ascaris ova. Frimodt-Möller and Barton considered the possibility that the condition investigated by them might be due to the constant or repeated passage of helminth larvæ through the lungs; but they observed patients over many months during periods when reinfestation with large numbers of worms was most unlikely to occur, and the eosinophilia and X-ray appearances remained unaltered.

The patients were not engaged in dusty occupations; therefore such conditions as silicosis, asbestosis and anthracosis could be eliminated. "If the lung condition were due to the ordinary dust of a dusty country, the condition should be extremely common in many parts of India, but there is no evidence of this." Further, eosinophilia is not usually noted as an accompaniment of pneumonokoniosis. However, Frimodt-Möller and Barton remark that the ætiological importance of dust cannot be ruled out without further study.

Asthma must be considered in any attempt to discover a cause for the disorder. In only 35 of their 175 cases could Frimodt-Möller and Barton find a history of asthma or bronchitis, and in only a few of these did they actually observe asthmatic seizures. "In any case we can say that typical asthma is not characteristic of this disease." At the same time they admit that an allergic basis is the most likely one.

After reading this paper by Frimodt-Möller and Barton one has first to question whether the syndrome they describe is really a new syndrome or whether it is tuberculosis or pneumonokoniosis or other well-recognized pulmonary disorder, accompanied by eosinophilia because of some special factors. The evidence provided by Frimodt-Möller and Barton is strongly in favour of its being a separate entity. It certainly does not seem to be tuberculosis. But the healthily sceptical among us will await with interest the results of autopsy and the histological examination of individual nodules.

Radiography of the thorax is becoming more and more widely used, and rightly so. But much remains to be learnt about the interpretation of X-ray shadows of the thoracic contents, and unless this is borne in mind there is a danger that many non-tuberculous or healthy persons may be branded as tuberculous. Frimodt-Möller and Barton have done a service if they have even done no more than draw attention to one of the difficulties in X-ray interpretation.

[1] *The Indian Medical Gazette*, October, 1940.

INVALID AND OLD-AGE PENSIONS IN AUSTRALIA.

THE statement on the invalid and old-age pensions in Australia for the twelve months ended June 30, 1940, has been prepared in accordance with Section 54 of *The Invalid and Old-Age Pensions Act* of 1908-1937. Some of the figures are so interesting that they are reproduced in this place without comment.

The Commonwealth began to pay old-age pensions on July 1, 1909; that portion of the act which authorizes payment to women on attaining the age of sixty years came into operation on December 15, 1910. During the year under review the number of old-age pensions granted was 26,875. Of these, 10,928 were in respect of persons in New South Wales, 7,079 in Victoria, 3,558 in Queensland, 2,335 in South Australia, 2,117 in Western Australia, and 858 in Tasmania. On June 30, 1940, the number of old-age pensions current for the whole of the Commonwealth was 240,545; this number was an increase for the previous twelve months of 7,709. During the financial year ended June 30, 1940, all invalid pensions in force were specially reviewed, and at June 30, 1940, all those pensioners who had become qualified for old-age pension by age and residence were transferred to the old-age pension list. This gives a revised figure of 272,896 for old-age pensions current on June 30, 1940. Of the 26,875 pensions granted during the year, 5,116 were to persons at sixty years of age and 4,781 of these were women. After age sixty the number gradually falls, except that at age sixty-five there is a sharp increase (at sixty-four the number is 1,048) to 4,813, and of these 4,028 were granted to men.

During the year the number of invalid pensions granted was 10,636, and the total number of pensions current on June 30, 1940, was 91,047. If the number transferred to old-age pensions is deducted the revised figure for invalid pensions current on June 30, 1940, is 58,696. If the number of transfers is ignored the increase in the number of pensions for the six months is 2,235. Most invalid pensions are given to persons between the ages of forty-eight and fifty-nine, the largest number for any one age being 632 at fifty-eight. Children of sixteen years of age who received the invalid pension numbered 472.

The number of old-age pension claims rejected was 67,573, and the number of invalid pension claims rejected was 85,357.

The total number of old-age and invalid pensioners at June 30, 1940, was 331,592. The number of old-age pensioners per 10,000 of the estimated population as at June 30, 1940, was 388; the number of invalid pensioners per 10,000 was 84. The number of old-age and invalid pensioners per 10,000 was 472. Considered from the point of view of States, the figures show that Tasmania has a higher number per 10,000 than any of the other States in both the old-age and invalid pension groups, the figures being 442 and 106.

The cost to the Commonwealth (the liability at June 30, 1940) of old-age pensions was £13,615,732; the liability in regard to invalid pensions was £2,965,326, giving a grand total of £16,581,058 as the liability of the Commonwealth for old-age and invalid pensions at June 30, 1940. The average fortnightly pension has risen from nineteen shillings and one penny in 1910 to thirty-eight shillings and sixpence in 1940.

The cost of administration of the invalid and old-age pensions was approximately £130,000 for the year.

Abstracts from Medical Literature.

GYNÆCOLOGY.

The Fallopian Tube during Menstruation and Pregnancy.

E. A. JOLL (*Monatsschrift für Geburtshülfe und Gynäkologie*, Volume CX, Numbers 4 and 5, 1940) has investigated the cyclical changes in the tubal epithelium during the menstrual cycle and pregnancy. Phases of proliferation and secretion occur, while proliferation of the blood vessels is especially noted between the thirteenth and sixteenth days of the cycle. Examination of the tubes in pregnancy showed a close resemblance to those in the third and fourth weeks of the normal cycle. Glycogen could be demonstrated during all phases of the cycle and during pregnancy. In eclamptic cases a large amount of glycogen was present, which the author ascribes to the general metabolic upset.

A Simple Method of Therapeutic Abortion Combined with Sterilization.

HENRY C. FALK AND A. SHUKURIS (*Western Journal of Surgery, Obstetrics and Gynecology*, October, 1940) describe their technique of hysterotomy and sterilization under local anæsthesia. A traction suture is placed in the fundus of the uterus, which is delivered into the wound. The cornual end of both tubes and the top of the fundus of the uterus to which the ovum adheres are excised in one piece. The residual cut ends of the tubes are buried in the uterine muscle as the hole in the fundus is closed with deep sutures. The authors state that the procedure is simple and safe and the technique easily mastered.

Pregnandiol Excretion following Bilateral Oophorectomy in Early Pregnancy.

GEORGEAMA SEEGAR AND ELEANOR DELFS (*The Journal of the American Medical Association*, October 12, 1940) studied a patient from whom all ovarian tissue was removed on the sixty-third day of pregnancy. Particular attention was paid to the excretion of pregnandiol. Clinically, no abnormalities were observed during pregnancy or parturition. The excretion of pregnandiol, however, remained far below that found in a normal pregnancy. On only two occasions did it even slightly exceed values found in non-pregnant women having normal menstrual cycles. Gonadotropic hormone estimations on blood and urine gave values comparable with those found in normal pregnancy. The authors consider that this investigation lends support to the theory that the *corpus luteum* hormone has an extraovarian origin during the last two-thirds of gestation. The placenta is the most probable source.

The Relation of Vitamin B_1 to the Reproductive Cycle.

P. F. WILLIAMS, G. C. GRIFFITH AND FLORENCE G. FRALIN (*American Journal of Obstetrics and Gynecology*, August, 1940) have investigated the vitamin B_1 intake of 91 pregnant women, and they carried out an electrocardiographic examination on these patients. Eight of them showed changes signifying a vitamin B_1 deficiency; but there was no positive correlation between these electrocardiograms and the adequacy of the vitamin B_1. The authors have taken as their standard an intake of 500 international units as set by Strebeling and Phipard. The Health Committee of the League of Nations suggested in its nutrition requirements for pregnancy that 150 to 250 international units of vitamin B_1 are essential. Cowgill regards this dosage as too low, and suggests that not less than 15 units per 100 calories should be used. Dreckmann gives 400 international units for the final 28 weeks, then 600 units per day to term. On the other hand, Sure demonstrated that in rats fed on 100 microgrammes of thiamin sterility occurred in females of the second generation, and 400 microgrammes produced failure of lactation in the third generation. In one-third of the patients studied there was a lack of vitamin B_1 according to the author's standard of 500 units, and there was a positive correlation between the inadequacy of the intake and deficiency symptoms, such as excessive nausea, vomiting, fatigue and paræsthesia.

The Irving and Pomeroy Methods of Tubal Sterilization.

FRANCES HILL FOX (*Surgery, Gynecology and Obstetrics*, October, 1940) states that among 432 operations on the Fallopian tubes for the purpose of sterilization there were no failures by the Irving technique; among 50 cases there was one failure when the Pomeroy technique was used. In the Pomeroy technique a loop of the middle portion of the tube is picked up, ligated with an absorbable suture and then resected. In the Irving method of sterilization one horn of the uterus is drawn into the abdominal wound. One and a half inches from the cornual insertion of the tube a ligature of number 1 chromicized catgut is passed through the mesosalpinx and tied. Just proximal to this a double suture ligature is tied about the tube. The mesosalpinx is clamped, the tube cut free and the mesosalpinx is ligated. A stab wound in the uterine muscle is made near the base of the tube. This wound is opened up by a hæmostat, and by means of a curved needle on the suture of the double ligature guided by a director, the tube is buried in the uterine muscle to a depth of three-quarters of an inch. The author points out that it is important to display the fimbriated end of the tube to prevent any error in identification between the tube and the round ligament.

Contraceptive Practices.

G. W. KOSMAK (*American Journal of Obstetrics and Gynecology*, October, 1940) discusses contraception. Although acknowledged for centuries, the practice of contraception has assumed an important aspect during the last quarter of a century. The indiscriminate, unrestrained and often unreasonable propaganda of the earlier period no longer prevails. However, the medical profession is assuming grave responsibilities, and it is impossible to escape the thought that unless these methods for artificial control of conception are carefully guarded and regulated, they may in time not only manifest a directly harmful effect on the national population growth, but tend to make men and women refuse to accept their responsibility towards child bearing. The author holds that the term birth control is an unfortunate misnomer, and that the wide employment of contraceptive measures has not brought about that unalloyed state of bliss which earlier enthusiasts had promised. If contraceptive practices are properly used in cases of maternal illness and for other legitimate reasons, then the physician and no one else should be the guiding influence. The so-called birth control clinics are not under the control of hospitals or the State, and in the near future it must be decided who are to guide the activities of these clinics; in the author's opinion they should be attached to the out-patient departments of the hospitals. As the position now stands, they are unlicensed and therefore uncontrolled by a supervising authority, except the local policeman, and the author concludes that birth control in the generally accepted popular sense of the term is not a panacea for the evils of this world.

Calcium, Phosphorus and Nitrogen Metabolism of Women during the Second Half of Pregnancy and in Early Lactation.

W. OBERST AND E. D. PLASS (*American Journal of Obstetrics and Gynecology*, September, 1940) report metabolic studies of five pregnant women and of three during the first part of lactation. The patients were admitted in separate quarters, where they were constantly (day and night) under the supervision of a graduate nurse. They were allowed to spend several hours in the sunshine and were given certain work. Their diet was based upon the general prenatal diet recommended by the department of pædiatrics of Iowa. It contained a minimum of a quart of milk per day, one egg, one serving of meat or fish, two vegetables, two fruits, one teaspoon of cod liver oil, one ounce of butter, bread, potatoes *et cetera*. All food was analysed, including the water. The calcium intake varied from 1·63 to 2·64 grammes, and the retention from 0·23 to 0·88 gramme. In every case the calcium retention exceeded the calcium requirements of the fœtus. *Post partum* the retention was from 0·024 to 0·511 gramme. The low levels of retention were probably accounted for by the lactation, which was unusually good. In regard to phosphorus, all the patients retained more than was necessary for fœtal needs, except one patient, who was a large woman and lost weight till her food intake was increased. In the post-partum state a negative balance was found in those producing large quantities of milk. The findings in the nitrogen retention were varied. The purpose of this study was to determine the calcium, phosphorus and nitrogen metabolism in pregnant women under dietary conditions, which at the present time are believed to be nearly ideal for the growth of the fœtus without depleting the maternal organism of these elements. The importance of the use of large quantities of milk and certain of its prepared products cannot be over-emphasized.

The Management of the Menopause.

AMIL NOVAK (*American Journal of Obstetrics and Gynecology*, October, 1940) discusses the management of the menopause. The newer understanding of endocrinology has gradually percolated through to the laity, and so the folk lore of former days is less generally prevalent. However, the medical pro-

fession itself is a good deal to blame, for attributing all unknown ills to the change of life, and the easy assumption of menopausal ætiology of symptoms in women in the fifth decade of life may lead to failure to recognize the real cause of the symptoms. The real cause may be an economic or a marital problem, or some genuine physical disease, and the exhibition of some œstrogenic substance is little likely to do the woman good. The gravest of all mistakes is to believe that menstrual irregularities are normal manifestations of the menopause; many a woman's life has been sacrificed on this belief. There is only one group of symptoms which are recognized by all as having a true menopausal genesis, and these are symptoms of the vasomotor group. These are symptoms which fortunately respond well to treatment by œstrogenic substances, and it is well to remember that the control of flushes is an excellent guide to the dosage required. There is no need for vaginal smears to be taken, for the symptoms are not infrequently relieved and the dosage is largely dependent on results rather than on theoretical considerations. Novak regards it is a reproach to the medical profession that the old-time whole-gland ovarian substance is still being manufactured by even high-grade pharmaceutical houses, because there is a demand for it by the medical profession. Why any physician can still cling to these inert substances when a definite chemical compound is available is hard to understand. In a case of average severity 10,000 international units in oil injected every third day will relieve the condition; two to three injections may suffice, but six to eight may be necessary. Quantitative relationships vary so much in different women that the effective dose must also vary. In regard to the question of cancer and œstrogenic substances, there is as yet no worthwhile evidence that even large doses of œstrogen carry with them any risk of inciting cancer. Certain human beings are unusually susceptible to cancer, but in the present state of knowledge there is no justification for the withholding of œstrogenic therapy when menopausal symptoms are troublesome.

OBSTETRICS.

The Effect of Vitamin K Administered to Patients in Labour.

J. E. FITZGERALD (*American Journal of Obstetrics and Gynecology*, September, 1940) reports results of 50 cases in which mothers were given 4,000 Almquist units of vitamin *K* with 10 grains of bile salts orally during labour. This medication was given from forty-five minutes to twenty-six hours before delivery. Of the mothers, 96% showed higher prothrombin levels than before the administration of vitamin *K*. Regardless of whatever the previous level was, there was always an increase, except in two cases; the average increase was 21·3 points, and the newborn baby showed a corresponding rise. Prothrombin level of untreated mothers was 160·2%, compared with 135·2% for those who were untreated. The authors find it interesting to note that in the special series of patients to whom sodium pentobarbital was given as an analgesic, there was a depression in the prothrombin level for both mother and child. This depression could be prevented by the proper use of vitamin *K*.

Abdominal Pregnancy.

C. B. LULL (*American Journal of Obstetrics and Gynecology*, August, 1940) reports five abdominal pregnancies. He shows how the maternal mortality rate of between 30% and 40% can be reduced by the adoption of certain general surgical principles. The most important of all is to be prepared for hæmorrhage by having the patient's blood typed and a donor at hand. In the light of his experience he cites the following points. Each patient must be treated as an individual. Delay to obtain a living child is unwise, as many of these children are deformed. It is not desirable if the condition is diagnosed only late in pregnancy to allow it to continue for longer than the thirty-sixth to thirty-eighth week. To permit the patient to advance to full term increases the maternal risk and decreases the chance of a living offspring. Should death of the fœtus occur, it seems advisable to defer operation for three to four week until the vascularity of the placenta has decreased. But the patient should be in hospital during this period, and a careful preparation for the combating of hæmorrhage before, during and after operation should be made. The incision should be made if possible over the child rather than over the placenta. The child should be removed without disturbance of the placental site. When it is seen that the placenta will be partially disturbed, the larger vessels should be ligated before an attempt at separation is made. Packing to control hæmorrhage is necessary in some cases, and when the fœtus is infected an extraperitoneal approach is desirable and drainage without removal of the sac is the only correct procedure. When packing has to be removed the patient should be in the theatre, and preparation for a transfusion should be made in case fresh hæmorrhage is encountered. When a live child is removed, no attempt at the removal of the placenta should be made and the abdomen should be closed without drainage. The placenta may not become absorbed and may even result in an abscess. These complications can be dealt with later, unless sepsis makes an earlier incision necessary.

Modern Trends in the Artificial Termination of Pregnancy and Labour.

FREDERICK C. IRVING (*American Journal of Obstetrics and Gynecology*, August, 1940) compares statistics of 1826 with those of 1930. Whilst it is admitted that the vital statistics of 1826 may not be entirely accurate, yet in spite of all the great advances the statistics of today are very little different. The average maternal mortality rate cited from 1781 to 1820 was 4·7 per 1,000 births. From 1930 to 1935 the average for New York, Philadelphia and Boston was 6·7 per 1,000 live births. Investigations by committees in these three cities show that most of the catastrophes were the result of interference with "the ample resources of nature". In Massachusetts one in every twenty-nine deliveries was by Cæsarean section, and the author thinks it extremely unlikely that the structure of woman has altered in one hundred years to demand this radical change. Behind this really lies the fear of the doctor, insufficiently skilled in the art of pelvic delivery, who takes what appears to be the easiest road. If every Cæsarean section guaranteed that the baby would be born alive there might be something to justify it; but in 4,298 Cæsarean sections the infantile death rate was 8·8%. No one will quarrel with the necessity for Cæsarean section in cases of true cephalo-pelvic disproportion, or in cases of central *placenta prævia*. Recent opinion suggests that conservative measures in *ablatio placentæ* are desirable. It is not the treatment for preeclampsia, eclampsia, nephritis, heart disease, tuberculosis, nor does the author believe it to be advisable in cases of diabetes. The word prophylactic is loosely employed in the modern American vocabulary. It really means "defending or protecting against disease", and if in the minds of some obstetricians of today the normal delivery of a baby that presents by the vertex is a disease, then prophylactic podalic version and prophylactic forceps application are correct usage, but not otherwise. Induction towards the end of pregnancy that is performed for a distinct indication is a most valuable procedure. However, delivery by rupture of the membranes has come into vogue, and figures have been published to show that it causes no ill effects. It is not enough in medicine to show that a new policy produces results that are no worse than those obtained previously; it should produce better results.

X-Ray Evidence of Fœtal Death.

HERBERT THOMAS (*Surgery, Gynecology and Obstetrics*, August, 1940) discusses those indications of fœtal death which are revealed by skiagrams. The principal changes in the fœtal skeleton are flattening of the skull, bending of the vertebral column, overlapping of the skull bones with decrease in radius, later separation of the skull bones, asymmetry of the skull, failure of the size of bones to correspond with the duration of pregnancy, haziness of bony landmarks and contours. The author claims that it may be possible to differentiate brain collapse from degeneration before overlapping of the bones has occurred. On the other hand, obstetricians state that overlapping occurs in a healthy fœtus. The author recommends that several skiagrams be taken at 24-hour intervals, and concludes that the X-ray examination is at present merely an adjunct to clinical methods.

Prophylaxis of Pyelitis Gravidarum.

H. F. TRAUT, D. S. BAYER AND C. M. MCLANE (*The Journal of the American Medical Association*, July 13, 1940) state that intensive work during recent years has revealed some of the factors in the ætiology of pyelitis of pregnancy and consequently has enabled means of prevention to be established. The authors have designed an ante-partum routine of examination, so that the earliest stages of urinary infection can be detected and patients with primary attacks distinguished from those suffering from repeated exacerbations. In the former group small doses of sulphanilamide given with sodium bicarbonate have checked the disease in the prodromal stages, and the incidence of febrile disease has been reduced by 50%. Early availability of hospital care with vigorous drug treatment has reduced the length of the febrile phase by about 66%, and severe complications to mother and child have been obviated.

Special Articles on Psychiatry in General Practice.

(Contributed by request.)

XXVII.
NEUROSIS AND COMPENSATION.

Incidence of Neurosis Associated with Accidents.

JEFFREY RAMSAY, writing in *The British Medical Journal* of August 19, 1939, analysed a series of 400 cases of injury following accident; he found that in 165 cases, or 41%, the patient showed some functional nervous disorder as a sequel to the accident. He found that age and sex played no special part in its production, nor did it have any special relation to the severity of the injury. This proportion is not surprising, as he also points out that reliable authorities state that the proportion of functional as opposed to organic disease in ordinary medical practice lies between 35% and 75%. So it is probable that the proportion of functional disease associated with accident does not differ much from that occurring with ordinary sickness.

Types of Neurosis which follow Accident.

The types of neurosis that follow accident are, of course, the same as those that occur in ordinary circumstances, and the term traumatic neurasthenia merely indicates the causative factor and not a special type.

(i) Post-concussion syndrome.
(ii) Neurasthenia.
(iii) Anxiety neurosis.
(iv) Mild depression, or (to use an old-fashioned but useful term) "psychasthenia".
(v) Hysteria.

These are all expressions of exhaustion of the vital nervous reserve, and all have symptoms common to each, except hysteria, in which the mental anxiety is fully converted, as it were, into paralysis, anæsthesia, loss of function, aphonia, spasms *et cetera*. According as to where the symptom emphasis lies, so we put the neurosis into its arbitrary diagnostic division. Table I will, I hope, give an appropriate idea of the varying proportion of symptoms in the majority of such cases as I would judge them.

TABLE I.

Symptom.	Post-concussion Syndrome.	Neurasthenia.	Anxiety Neurosis.	Mild Depression (Psychasthenia ?).
Weakness	++	++++	+	++
Insomnia	++	+	+	+++
Inability to concentrate	++	++	+	++++
Anxiety	+	+	++++	++
Emotionalism	++	++	+	+
Palpitation	+	+	+++	+
Sweating	+	++	+++	+
Dizziness	++	++	++++	+
Tremor	+	+	++	+
Loss of interest	++	++	+	++++
Loss of mental capacity	++	++	+	++++
Headaches	++++	++	+	+
Irritability	+++	++	++	+++

Factors of Causation.

There is no single factor in the production of neurosis; every neurosis has a multiple causation, although the main factor behind them all is a disturbance of emotion due to bad habits of thinking, and only occasionally due to congenital or hereditary lack of control. It is emotion for which the power is turned on, as it were; thinking without emotion and even severe physical activity use very little nervous energy in comparison with a burst of anger or fear. Continued emotional wastage gradually saps the precious reserve of nervous energy, and the production of actual symptoms is simply due to the uncovering of unpleasant monsters as the dam gradually dries up. Once they are uncovered, it is difficult to cover them up again for several reasons. First, conscious fear of painful strange feelings and of the unknown prevent the accumulation of sufficient energy to allow the nervous system to function smoothly again; secondly, the patient may find that such symptoms get him attention and sympathy which he never received before, and the neurosis may become the means of achieving unworthy aims (this is usually what is understood when the term neurotic is used); and thirdly, the exhaustion of the nerve cells may be so severe as to be partially non-reversible, so that permanent recovery is impossible. Thus in the treatment of neurosis the patient must (i) understand how his symptoms have been produced, (ii) change his attitude to his symptoms from fear to indifference, (iii) be taught to conserve and control his emotional energy, (iv) learn to have all unworthy aims brought to the light of day, and (v) be helped on the physical side by sedatives and good food.

The main factors in the production of neurosis associated with accident (apart from compensation) are as follows. The nervous health of the patient at the time of the accident depends on the innate disposition, the thinking and emotional habits which the patient has developed, and the present environmental stresses (domestic, social, economic) and the state of physical health and nutrition. If such factors were acting in such a way as to be gradually depleting the patient's nervous reserve, and if such reserve had reached a low level, the shock (the second factor) associated with quite a trivial accident might be sufficient to exhaust still further the nervous reserve to the point of uncovering those feelings and sensations which, when uncontrolled, constitute neurosis. Again, the surgical shock (third factor) associated with a trivial accident, for example, the crushing of a finger tip, may be considerable and may further deplete the nervous reserve. If to the initial shock of the accident are added days of pain (the fourth factor) perhaps unrelieved by sedatives, and nights of insomnia (the fifth factor) and worry (the sixth factor) over possible unemployment, we have a drain on the nervous vitality which may test the strongest nervous system.

It is seen how it is possible that accident, quite apart from compensation, may precipitate neurosis. We shall now see how compensation may further help to produce neurosis. True malingering is to pretend to have symptoms you really have not got, for the purpose of some personal gain, and is, I think, very rare. It is impossible for a patient actually to create nervous symptoms; but he may exaggerate them once they have arisen and keep them alive perhaps. Exaggeration of symptoms presupposes the existence of those symptoms and is not true malingering, but is rather a natural tendency, especially if the question of some monetary gain is at stake. The doctor in his examination should try to ascertain whether there is evidence of exaggeration, and allow for it in his final judgement. Sometimes patients, even when compensation is involved, minimize their disabilities in their anxiety to go back to work.

Exaggeration of symptoms is also helped along by over-sympathetic friends or by the patient's imagining his case is worse than it is, owing to an unguarded remark by his doctor. The patient tends to put as good a case forward as possible, not so much for his own personal gain, but often for the benefit of his wife and children. Somewhat counteracting the patient's tendency to exaggerate his nervous symptoms is the harsh attitude of insurance companies, and sometimes of their medical officers, to any nervous manifestation associated with accident.

Legal Aspects.

The law in regard to compensation in this State is such that if it can be proved that incapacity following an accident has arisen even as an aggravation of some preexisting condition, the patient is entitled to compensation. This may perhaps be reasonable in certain cases; but in nervous disorder it seems rather unfair. Frequently it can be shown that accident is only one of five or six factors in the production of neurosis, and yet the insurance company has to bear the full responsibility for such neurosis. Surely some system of partial responsibility could be introduced which would be more just to both parties. The best basis for settlement is to agree on a reasonable amount of compensation before the patient is forced to resort to legal aid to gain his just rights. An early settlement not only throws the responsibility of recovery on to the patient, but also saves him the worry of a legal action at a time when any mental strain may retard recovery.

Examination of Patients for Compensation.

The examination of a patient suffering from nervous disease, when the question of compensation is concerned, should include an account of the accident and a chronological account of the symptom development, and should also include a list of present disabilities, the state of mental and physical health at the time of the accident, and any previous illnesses, any abnormal environmental circum-

stances, and a full physical examination. In taking a history, although it is obviously not wise to ask direct questions about various symptoms, it is necessary to find out about such things as sleep, changes in personality, limitations of social capacity *et cetera*. It is necessary to look out for conscious exaggeration both of symptoms and of signs, such as reflexes and tremors, and for evidence of resentment in regard to the injury. Malingering is hard to detect, and even in the rare cases in which it occurs, it depends on catching the patient out in some untruth.

Prevention of Neurosis.

Much can be done to prevent the occurrence of neuroses following accident. Pain should be promptly relieved, insomnia should be looked for and treated, the patient should constantly be reassured, and the doctor should be careful not to convey, by word or expression, any suggestion of permanence of disability; every patient is full of fears, and it needs very little suggestion on the doctor's part to stimulate them. Examination should be as short as possible, as prolonged examination tends to alarm the patient. If any concussion has taken place, at least two weeks' rest in bed is desirable, and a very slow return to normal activity should be allowed. Many of these patients develop neurosis by forcing activity on a brain which is not well enough for normal function. Nervous symptoms are always serious, and occur only when the nervous vitality is dangerously lowered; they should be treated energetically with reassurance and sedatives, as mentioned earlier. When the patient returns to work the doctor should make sure that for a few weeks he is allowed light duties, and although this is difficult to arrange, it should be insisted upon.

Conclusion.

Your final opinion is based largely on the patient's story of the sequential development of his symptoms. Thus, in a court of law, as neuroses seldom have any outward physical signs, the barrister for the insurance company naturally stresses this point, and the case is then decided on whether the patient is telling the truth or not. However, there are other factors which also help to make up a doctor's opinion—namely, a clinical sense or judgement which comes from the experience of hundreds of similar cases, the confirmation of the patient's statements by the questioning of his relatives, his friends and his doctor, and also their evidence as to the changes which have taken place in the patient's demeanour and in his mental, physical and social capacities since the accident.

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British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Queensland Branch of the British Medical Association was held at the British Medical Association Building, Wickham Terrace, Brisbane, on December 13, 1940, DR. J. G. WAGNER, the President-Elect, in the chair. The chair was later taken by Dr. R. G. Quinn.

ANNUAL REPORT OF COUNCIL.

The annual report of the Council, which had been circulated among members, was taken as read on the motion of Dr. Alex. Murphy, seconded by Dr. J. L. Simmonds, and was adopted on the motion of Dr. F. W. R. Lukin, seconded by Dr. McQueen Thomson.

The Council has pleasure in presenting the following report of the work of the Branch for the year ending November 8, 1940.

Membership.

The membership of the Branch is 535, as against 532 in 1939, making an increase of 3. There are also 12 honorary associate members.

The gains were: new members, 10; transferred from other Branches, 24; members reelected, 6.

Losses have been: due to transfers to other Branches, 21; default in payment of subscription, 7; resignations, 5; deceased, 1; deregistered, 1; suspended, 1; membership ceased, 1.

During the year the Branch has sustained a loss by the death of Dr. Adela Porter.

Of the five resignations, two were due to retirement from practice.

Thirty-three members have gone or are leaving on active service with the Navy, Army and Air Force, whilst twenty-eight are on full-time home service.

Meetings.

General.

In addition to the annual meeting, ten meetings of the Branch were held, including two clinical meetings. The average attendance was twenty-nine.

Council.

Twenty-two ordinary meetings of the Council were held. The record of attendances of the Council is as follows:

	Ordinary.
Dr. C. E. Wassell (President)	20
Dr. J. G. Wagner (President-Elect)	19
Dr. Neville G. Sutton (Past-President)	6
Dr. Horace W. Johnson (Honorary Secretary)	21
Dr. R. G. Quinn (Honorary Treasurer)	21
Dr. D. Gifford Croll (Chairman of Committees and Federal Council Representative and Councillor)	21
Dr. L. H. Foote (Honorary Secretary of Committees)	18
Dr. Basil L. Hart (Councillor)	14
Dr. H. W. Horn (Councillor)	19
Dr. Alan E. Lee (Councillor)	18
Dr. F. W. R. Lukin (Councillor)	13
Dr. S. F. McDonald[1] (Councillor)	5
Dr. A. E. Mason (Councillor)	15
Dr. Ellis Murphy[2] (Councillor)	7
Dr. Mervyn S. Patterson (Councillor)	15
Dr. T. A. Price (Vice-President of the Branch, Federal Council Representative and Councillor)	17
Dr. J. L. Selwood (Councillor)	18
Dr. L. P. Winterbotham (Councillor)	17

Scientific.

February.—Clinical meeting combined with Mater Misericordiæ Public Hospital Clinical Society.

March.—Dr. Alex Murphy: "A Summary of Recent Knowledge of the Clinical Application and Toxic Effect of Sulphanilamide and Sulphapyridine".

April.—Dr. Alan E. Lee: "The Treatment of Peritonitis".

May.—Dr. Felix Arden: "Laryngeal Obstruction in Childhood".

June.—Dr. E. Weston Hurst: "Influenza and other Respiratory Infections due to Viruses" (The Joseph Bancroft Memorial Lecture).

July.—Dr. E. W. Casey: "Carcinoma of the Lip".

August.—Dr. Konrad Hirschfeld: "Surgical Treatment of Pulmonary Tuberculosis".

September.—Dr. S. F. McDonald: "The Debt of Medical Science to the Fighting Forces" (Jackson Lecture).

October.—Dr. C. A. Thelander: "Chloroform Anæsthesia".

November.—Clinical meeting combined with the Hospital for Sick Children Clinical Society.

The following is the personnel of the Committee responsible for the arrangement of the programme of papers: Dr. A. E. Mason, Dr. Alan E. Lee and Dr. J. L. Selwood, and the *ex officio* members of the Council.

Office Bearers.

Dr. J. G. Wagner was elected President-Elect for the ensuing year, and Dr. Horace W. Johnson was reelected Honorary Secretary.

The following office bearers were elected by the Council:

Honorary Treasurer: Dr. R. G. Quinn.

Chairman of Committees: Dr. D. Gifford Croll.

Honorary Secretary of Committees: Dr. L. H. Foote.

Honorary Librarian and Curator of Museum: Dr. Neville G. Sutton.

Assistant Honorary Librarian: Dr. Konrad Hirschfeld.

[1] Sick leave.
[2] Granted leave in July.

Councillors.

No change took place in the personnel of the Council. In August Dr. Ellis Murphy was granted leave of absence for the period of his term as he was going on active service with the second Australian Imperial Force.

It is with regret we announce that Dr. Neville G. Sutton, who has been a member of the Council for a number of years and who was President of the Branch in 1939, is retiring from the Council this year. Dr. Sutton's arduous university and hospital duties make it difficult for him to attend meetings.

Dr. Horace W. Johnson, who has occupied the position of Honorary Secretary of the Branch for the past three years, has also found it necessary to relinquish the appointment owing to other calls on his time.

The Council desires to record its appreciation of the valuable services rendered to the Branch by Dr. Sutton and Dr. Johnson.

Ethics Committee.

At the annual meeting of the Branch held on December 8, 1939, the following were reelected members of the Ethics Committee: Dr. Alex Marks, Dr. G. P. Dixon, Dr. G. W. Macartney, Dr. Gavin Cameron and Dr. M. Graham Sutton.

No matters have been submitted to the Ethics Committee during the year.

Library.

During the year 92 books have been borrowed from the library by 39 members.

The official history of the Australian Army Medical Services, Volume II, has been added to the library.

A new bookcase has been installed in the library.

Representation.

The Branch was represented as follows during the year:

Council of the British Medical Association: Professor R. J. A. Berry.

Federal Council of the British Medical Association in Australia: Dr. T. A. Price, Dr. D. Gifford Croll.

Australasian Medical Publishing Company, Limited: Dr. D. Gifford Croll.

Medical Officers' Relief Fund (Federal): Queensland Committee, Dr. D. Gifford Croll, Dr. J. Cameron Hemsley, Dr. G. P. Dixon.

Medical Assessment Tribunal: Dr. A. H. Marks.

Queensland Medical Board: Dr. D. Gifford Croll, Dr. R. G. Quinn, Dr. J. G. Wagner.

Queensland Post-Graduate Committee: Dr. S. F. McDonald, Dr. E. S. Meyers, Dr. Alex Murphy, Dr. N. W. Markwell, Dr. Alan E. Lee, Dr. Felix Arden.

Queensland Cancer Trust: Dr. B. L. W. Clarke, Dr. G. W. Macartney.

Queensland Nutrition Council: Dr. P. A. Earnshaw, Dr. Noel M. Gutteridge.

State Committee Coordination of Medical Services of the Commonwealth: Dr. J. G. Wagner.

Queensland Bush Nursing Association: Dr. L. Bedford Elwell.

Standards Association of Australia: Dr. E. O. Marks.

Standards Association of Australia: X-Ray Equipment Subcommittee, Dr. B. L. W. Clarke.

Australian Aerial Medical Services: Dr. Harold Crawford.

Red Cross Society Blood Transfusion Service Committee: Dr. Milton Geaney.

The Surf Life Saving Association of Australia, Queensland State Centre: Dr. F. W. R. Lukin.

Physical Fitness Association of Queensland: Dr. E. S. Meyers, Dr. Harold Crawford.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was represented by Dr. Joyce S. Stobo.

Subcommittees.

Hospital.

Personnel: Dr. F. W. R. Lukin, Dr. L. P. Winterbotham, Dr. Ellis Murphy, Dr. Alan E. Lee, and the *ex officio* members of the Council. The subcommittee met on five occasions.

Administration of Anæsthetics: A hospital board raised the question of a fee for the administration of anæsthetics to public hospital patients being charged by an honorary medical officer of the hospital. It was decided that the administration of anæsthetics was outside the scope of the terms of service, and the payment of such fees is to continue.

Hospital Patients: Letters were sent to the General Medical Superintendent of the Brisbane and South Coast Hospitals Board and to the Medical Superintendent of the Hospital for Sick Children, expressing appreciation of the practice that has been adopted whereby, upon discharge of patients, information concerning their condition is forwarded to the medical practitioner who sent the case to hospital.

Full-Time Medical Officers of Country Hospitals: The Council has taken steps to endeavour to prevent the appointment of full-time medical officers in one or two towns where it was considered that the appointment of a full-time medical officer would not have been in the best interests of the public.

Organization.

Personnel: Dr. F. W. R. Lukin, Dr. H. W. Horn, Dr. Ellis Murphy, Dr. J. L. Selwood, and the *ex officio* members of the Council.

During the year twenty-three meetings of the subcommittee were held, at which many matters of importance were dealt with, and action was subsequently taken by the Council on the following subjects:

Amendment of By-Laws: At the last annual meeting By-law No. 41, "Name Plates", and By-laws Nos. 71-76, "Federal Council of the British Medical Association in Australia", were altered and circulated to members in January, 1940.

Subscription Rates—Members on Military Service: In July last it was decided that members on full-time military duty in Australia, whether metropolitan or country, shall pay a subscription of £4 10s., and the amount payable by members on active service abroad shall be £2 5s. 6d.

General Practitioner Scale of Fees: The scale of fees for general practice has been amended and is available on application.

Mental Certificates: In view of the fact that some members were still using the old form of certificates instead of the forms issued under the *Mental and Hygiene Act of* 1938, a circular was sent out drawing attention to the matter.

Fees for Locum Tenentes: A request has been sent to the Federal Council that steps be taken to control the fees of *locum tenentes*, and that the amount be stabilized at £12 12s. per week as a maximum.

Admission of Enemy Alien Practitioners to Membership: The following resolution was passed by the Council in March last:

> That no alien practitioner who is not naturalized be admitted to ordinary membership of the Queensland Branch for the duration of the war.

Motor Car Parking Space on Wickham Terrace: A suggestion has been made that two parking standards, "Reserved for Doctors and Patients", be placed on each side of Wickham Terrace, in the area between Edward and Creek Streets, so that the area could be reserved for the parking of motor cars of doctors and patients. An endeavour is being made by the Council to obtain the cooperation of the members who practise in the area.

Petrol Rationing: The Liquid Fuel Control Board, Queensland, was approached concerning the quantity of petrol allowed to doctors. It was stated that if their issue is not sufficient they will be allowed an extra amount at any time upon lodging an application.

Representations were also made to the Board requesting that the attention of the public be drawn to the necessity for lodging their calls for doctors' services as early in the morning as possible, to enable the medical practitioners to cooperate in the petrol-saving campaign. This will often obviate the necessity for doctors going over the same ground twice.

State Electricity Commission: Correspondence was received from the State Electricity Commission concerning the condition of electrical equipment in hospitals' operating theatres and other locations under the supervision of members of the British Medical Association, and requesting cooperation in an endeavour to minimize the possibility of electrical accidents, by having the proper connexion (including the provision of adequate earthing facilities) of electrical equipment to the supply. A reply was sent stating that the Council is in sympathy with the desire of the Commission, and members of the Branch were circularized, drawing their attention to the matter.

Australian Aerial Medical Services: A copy of the proposed agreement with the medical officer was submitted to the Council, and the amendments suggested were accepted. Dr. J. G. Wagner has relinquished the position as representative of the Branch on the Queensland Council of the Australian Aerial Medical Services, owing to inability to attend meetings, and Dr. Harold Crawford has been appointed to take his place.

Medical Treatment of Evacuees from Shanghai and Hong-Kong: Information has been received to the effect that arrangements have been made by the Commonwealth Government to provide for medical services to army evacuees—in cases of naval and civilian evacuees each case

has to be considered and payment will be made in necessitous cases. Accounts should be forwarded to the Queensland Government Tourist Bureau.

Air Force Trainees.—It was decided to communicate with the Federal Council and request that the attention of the Minister for Air be drawn to a statement made in a wireless broadcast, to the effect that Royal Australian Air Force trainees are working sixteen hours a day at Narromine Training School, and point out the danger of overwork to these men.

War Emergency Organization—Protection of Private Practices Schemes for Assistance to Members on Military Service: In the metropolitan area a "B.M.A. Scheme for Assistance to Members on Military Service" has been functioning satisfactorily for almost a year. There are 141 signatories to the indenture, 10 donors and 19 beneficiaries. The management is vested in trustees, the personnel being Dr. Alex. Marks (chairman), Dr. R. G. Quinn, Dr. J. G. Wagner, Dr. R. A. G. Malcolm and Professor J. V. Duhig. Under the personal supervision of the manager, the Queensland Trustees Limited have very generously attended to the secretarial work.

Various schemes are also in existence in other centres, which include pool systems or mutually arranged agreements made between the local medical practitioners, whereby the practices of doctors who have enlisted are preserved and monetary payments made to them in some instances. Reference is made to the methods adopted in the reports of some of the local medical associations which are embodied in this report.

Obligations of the Profession to its Members who are or who have been on Military Duty: It has been decided by the Council to submit a resolution to the annual meeting of the Branch to be held on Friday, December 13, 1940, for adoption, as follows:

> No practitioner should commence practice without purchase in an area where practitioners are on active service for a period of two years or the duration of the war, whichever is the less, except by special permission of the Council of the Branch.

This is in conformity with a memorandum of the Federal Committee of August 8, 1918, which was circulated to members in September, 1939. It is felt by the Council that some definite provision is necessary for the protection of the private practices of members who are sacrificing themselves in the service of their country.

Advertising: Owing to the exigency of the war, the Council has granted permission to members to advertise the fact that they are putting in a *locum tenens* whilst they are on active service.

The Council has also resolved: "That for the duration of the war members are permitted to advertise resumption of practice after two weeks' absence on military duty." Three insertions are allowed.

Medical Appointments made during the War: Representations were made to various Government departments, hospital boards and friendly societies, requesting that new appointments be made for a period not exceeding one year. A reply was received from the Brisbane and South Coast Hospitals Board stating that the Board has agreed to the request in regard to new positions, and that leave of absence is to be granted to members of the medical staff who are called up for active service and their positions are secured. Affirmative replies were also received from a number of other hospital boards.

Medical Treatment of Dependants of Members of the Fighting Services: This matter has been considered by the Council and it has been decided that it must be left for the individual medical practitioner to make his own decision on the question.

Survey of Medical Man Power: At the request of the Federal Council a survey of the medical man power of the State was undertaken, which entailed a great deal of work in preparing a cross index. The survey will prove of value as a source of information auxiliary to the official military survey. The response by medical practitioners in Queensland was very satisfactory, but there are still twenty doctors in the country and thirteen in the metropolitan area who have not answered the *questionnaire*.

Military Medical Appointments, Second Australian Imperial Force: The limited allotment of senior military medical appointments to Queensland doctors was the subject of correspondence between the Council and the Director-General of Medical Services of the Commonwealth, Major-General R. M. Downes.

This matter was also taken up by the Society of Returned Medical Officers of Queensland.

Lodge.

Personnel: Dr. T. A. Price, Dr. L. P. Winterbotham, Dr. H. W. Horn, Dr. J. L. Selwood, Dr. F. W. R. Lukin, Dr. A. E. Mason, and the *ex officio* members of the Council.

Three meetings and one combined meeting with the General Practitioner Group Committee were held during the year.

A common form of agreement, lodge practice during the war period, and the introduction into country areas of the principles embodied in the metropolitan lodge agreement with the Friendly Societies Medical and Hospital Council, have been the main matters of general interest which were dealt with by the subcommittee. Meetings with representatives of the friendly societies organizations have also taken place.

Dr. T. A. Price has paid visits to both Maryborough and Bundaberg during the year on behalf of the Council, to discuss lodge matters. As usual, he has created a feeling of goodwill with the lodge representatives, which goes far to make amicable negotiations possible. Dr. Price also attended a meeting of the Federal Council Contract Practice Subcommittee which was held in Melbourne.

Lodge Capitation Fee, Metropolitan Area: In May last a letter was received from the Government Statistician's office advising that the lodge capitation fee computed in accordance with the agreement between the Queensland Branch of the British Medical Association and the Friendly Societies Medical and Hospital Council would be 27s. 6d. for the year commencing July 1, 1940. This is an advance of 6d. (per adult male member) on last year's rate.

Joint Committee: This committee continues to prove a satisfactory liaison between the Friendly Societies Medical and Hospital Council and the lodge medical officers. The British Medical Association representatives are Dr. T. A. Price, Dr. F. W. R. Lukin and Dr. A. E. Mason. It is with regret that we report the death of Mr. A. J. Phipps, the late Grand Secretary of the Manchester Unity Order, who was a member of the committee since its inception.

Policy for a General Medical Service.

A pamphlet entitled "A General Medical Service for Australia" is under consideration by the Federal Council for publication for the information of the public.

Conference of Country Members.

The annual conference of country members with members of the Council took place in Brisbane on June 5, when five centres were represented.

The main business considered was the common form of lodge agreement as approved by the Federal Council, and discussion as to the best means of extending to other centres the agreement regarding fixation of capitation fee, which exists in the metropolitan area, and is based on the rise and fall of the wage index figure. Problems associated with contract practice which may arise during the war were also discussed.

The question was raised regarding the protection of the practices of members in a town where a medical practitioner, who has been on the paid staff of the hospital, commences private practice in the town. The Council was requested to consider the framing of a by-law to deal with the subject. It was subsequently decided by the Council that it is not possible to give protection to the practices of members in such circumstances.

Medical Fees Tribunal.

Only one case was submitted to the committee. After fully investigating the matter a decision was given to the effect "That the fee charged was fair and just".

Affiliated Local Associations.

Downs and South Western Medical Association.

Meetings: During the year the following meetings were held:

Regular (that is, for routine business and educational purposes) in the months of November and December, 1939, and in March and July, 1940. In June a meeting in conjunction with the local sub-branch of the Dental Association was held.

Executive in February, May and August, and special in May.

Owing to war-time exigencies the regular monthly meetings have been reduced to meetings in alternate months, and two of these have lapsed owing to the inability of lecturers to attend.

In January Dr. J. G. Hulme resigned from the position of Honorary Secretary and Treasurer to the Local Association.

Dr. J. G. Morris Beale accepted the position of Acting Honorary Secretary, and Dr. V. R. Woodhill agreed to act as Treasurer.

Membership: The membership of the Association remains substantially the same. During the year Dr. J. Lloyd Simmonds left Crow's Nest and Dr. John Morrow took his place. Dr. Ian Horn has joined the Air Force.

Our acknowledgements are due and are gratefully tendered to the visiting lecturers who instructed us, and to the Queensland Post-Graduate Committee, who have made their services available. We gratefully acknowledge also the courtesy of the Toowoomba Hospitals Board and of Dr. T. A. Price in extending us facilities for the holding of meetings.

J. G. MORRIS BEALE,
Acting Honorary Secretary.

Bundaberg Local Association.

During the year two members, Dr. M. L. D. McKeon and Dr. D. Barry left to serve in the Australian Imperial Force and Royal Australian Air Force respectively. The remaining members are carrying on their practices and have arranged for both to receive their usual lodge cheques during their absence.

The Local Association has been negotiating with the Bundaberg Associated Friendly Societies Medical Institute to receive an increased capitation fee. The capitation fee was reduced 5s. per member during the depression, and there has been no increase since. The lodges have refused to agree to an increase, but we have begun negotiations again and thereby hope to obtain a fair and adequate payment.

ALEX. W. GRAHAM,
Honorary Secretary.

Townsville Local Association.

No meetings of the Townsville Local Association have been held during the year, except a social one to bid farewell to Dr. H. A. Sundstrup, who joined the Royal Australian Air Force.

W. J. CHAPMAN,
Honorary Secretary.

Mackay Local Medical Association.

Four meetings were held during the year, and the following papers were read: "The Safe Period in Birth Control", by Dr. M. J. Gallagher; "Worry", by Dr. G. A. Bolton; "The Anatomy and Physiology of the Nose and Accessory Sinus", by Dr. H. J. Taylor. A clinical meeting was held in July at the Mackay District Hospital.

During the year the following was resolved for the protection of practices of men going to camp. Those men doing a period of camp can send patients to any of the other men who will also be going into camp. Should the patient not wish to go to one of these men, he will be seen, free of charge to the man away, by any other practitioner in the town.

PAUL W. HOPKINS,
Honorary Secretary.

Rockhampton Local Medical Association.

The following is the report of the activities of the Association for 1939-1940.

War Emergency Organization: The scheme submitted by the Queensland Branch of the British Medical Association was discussed at length, but was thought impracticable for Rockhampton. Accountants representing all the members were asked to prepare a scheme for financial protection of the practices of members on active service. Unanimity could not be obtained, and eventually it was decided to take no action.

Enlistment in Second Australian Imperial Force: Dr. T. A. Parry, who had been secretary of the Local Association for several years, resigned upon enlistment with the second Australian Imperial Force. Dr. R. P. Rundle was elected in his stead. A letter of thanks and appreciation was sent to Dr. Parry for his long service as secretary, and a presentation was made at a farewell tendered to him by the members.

Membership and Finance: The membership of the Local Association totals 15, and it was found necessary to make a levy of £1 1s. per member to enable all outstanding accounts to be paid, and leaving a small credit balance in the bank.

Examination of Military Recruits: A satisfactory roster was established for this purpose.

A.R.P. Organization: Dr. R. P. Rundle was elected Controller of Emergency Medical Services. Dr. C. N. Matheson, Dr. J. C. Ross and Dr. R. P. Rundle drew up a scheme for the medical organization of Rockhampton which was accepted by all the doctors in the town.

Lodges: The Associated Friendly Societies were informed "that it is the desire of members of the Local Medical Association that, for the duration of the war and for a period of six to twelve months after the war ceases, as determined by the B.M.A., no practitioner will accept transfers from the lodge lists of any other practitioner on full-time military service". At a conference with representatives of the Associated Friendly Societies the latter agreed to endeavour to persuade intending transferees to remain on the lists of the doctors on active service.

At the same conference the Associated Friendly Societies agreed that quarterly advices of lodge lists be rendered by the twenty-first day of the first month in each quarter, and that no alteration be made during the quarter.

A further conference was held with the Associated Friendly Societies. It was decided that the time was inopportune to press for an increased capitation fee.

R. P. RUNDLE,
Honorary Secretary.

Queensland Post-Graduate Committee.

Annual Report, 1939-1940.

Personnel: Chairman, Dr. S. F. McDonald; Vice-Chairman, Dr. A. V. Meehan; Honorary Secretary and Treasurer, Dr. Norman Sherwood; Dr. Alex. Murphy, Dr. E. S. Meyers, Dr. Neville G. Sutton, Dr. N. W. Markwell, Dr. Ellis Murphy, Dr. P. A. Earnshaw, Dr. J. R. S. Lahz, Dr. F. J. Booth, Dr. L. A. Little, Dr. C. E. Wassell, Professor J. V. Duhig, Dr. A. E. Paterson, Dr. Alan E. Lee, Dr. J. F. Dunkley, Professor H. J. Wilkinson, Professor D. H. K. Lee, Dr. E. O. Marks, Professor G. Shedden Adam.

Meetings: Eleven meetings of the Committee were held during the year.

Honorary Secretary: Dr. Norman Sherwood, who has held the position of Honorary Secretary and Treasurer since January, 1938, has enlisted in the second Australian Imperial Force. It is desired to place on record the sincere thanks of the Committee for the efficient and cheerful manner in which Dr. Sherwood has always carried out his duties. Leave of absence was granted to Dr. Sherwood. Dr. Alec. E. Paterson has been appointed to the position of Honorary Secretary and Treasurer *pro tem.*

Week-End Course: A week-end course was held on Saturday and Sunday, November 4 and 5, 1939. Sir Robert Wade was the visiting lecturer, his subject being "The Treatment of Osteomyelitis". The membership was 29.

Annual Post-Graduate Course: The 1940 course was held from May 31 to June 7. The total membership was 60—55 town and 5 country members. Visiting lecturers were Mr. Fay Maclure, Dr. Cotter Harvey and Dr. E. Weston Hurst, who also delivered the Joseph Bancroft Memorial Lecture. An interesting feature of the programme was a demonstration of films given by Mr. R. F. O'Sullivan, of Melbourne, who came to Brisbane specially for the purpose.

Lectures—Country Centres: Arrangements were made for lecturers to be sent to meetings of the Ipswich Hospital Clinical Society, the Downs and South Western Medical Association, Toowoomba, the North Eastern Medical Association of New South Wales. Unfortunately a lecturer could not be sent to the South Burnett Local Medical Association, owing to the date not being suitable.

Military Service: In May last it was decided to communicate with the D.D.M.S. Northern Command and offer the assistance of the Post-Graduate Committee for any medical or surgical training which may be required for military service.

Finance: The balance sheet for the year ended June 30, 1940, shows a credit balance of £266 11s. 11d. in the Commonwealth Savings Bank.

General Practitioner Group.

Personnel: President, Dr. L. P. Winterbotham; Honorary Secretary and Treasurer, Dr. F. W. R. Lukin; Dr. J. G. Wagner, Dr. H. W. Horn, Dr. J. L. Selwood; *ex officio*, Dr. T. A. Price, Dr. D. Gifford Croll.

Meetings: Two meetings of the group and five committee meetings were held during the year.

At the meeting of the group held on March 28 the common form of lodge agreement (Federal) was discussed, and Dr. Price addressed the meeting and explained the present position with regard to friendly society work.

As a result of the resolutions passed at the meeting of the group held on July 25 the following recommendations were submitted to the Council of the Branch regarding lodge practice in the metropolitan area:

> That the capitation fee payable in respect of dependants of lodge members who are on active service overseas be reduced to twenty shillings (20s.).

That any single member who was on the doctor's lodge list previous to enlistment be accepted without medical examination on his return. [This matter is still under consideration.]

That the Friendly Societies Medical and Hospital Council be granted a concession of sixpence from July 1, 1940, for adult capitation fee for their management expenses.

Sections for Special Branches of Medical Knowledge.

Ear, Nose and Throat Section.
(Inaugurated in 1924.)

As the attendance at the meetings was very small, there is nothing to report from this section.

ATHOL QUAYLE,
Honorary Secretary.

Ophthalmological Society of Australia (Queensland Branch).

Only two meetings of the Queensland Branch of the Society have been held during the current year—the annual meeting, April 24, 1940, and an ordinary meeting, October 2, 1940.

Membership of the branch is 16. The following office bearers were elected for the year 1940: Chairman and State Representative, Dr. E. O. Marks; Honorary Treasurer, Dr. W. Lockhart Gibson; Honorary Secretary, Dr. F. Garrett Scoles.

Dr. Scoles subsequently resigned the office of Honorary Secretary owing to the complete absorption of his time with military duties, and Dr. Allan V. Henry was elected to fill the vacancy.

Matters of chief interest brought before the annual meeting on April 24, 1940, were:

A communication received from the Council of the Society embodying a recommendation that State sections of the Society should urge the members of State Parliaments to bring in legislation enforcing the use of safety glass for windscreens or other windows in automobiles. It was pointed out that Australian States, with the exception of Tasmania, had lagged behind Great Britain and America in this respect. It was also pointed out that safety glass would shortly be available in Australia for use in spectacles; and it was considered that the use of this glass in spectacles worn by children, athletes, mechanics, soldiers, A.R.P. officials *et cetera* would increase the safety margin as regards eye and facial damage.

The present unsatisfactory remuneration paid by the Federal authorities for examination and report in cases of applicants for the blind pension is receiving consideration.

Dr. E. O. Marks attended the annual general meeting which was held in Sydney on October 10 and 11, instead of in Perth, as previously arranged.

At the ordinary meeting convened by the local Branch for October 2, 1940, military duties, illness and absence from Brisbane unfortunately depleted the attendance of members and as a consequence merely formal business was dealt with.

ALLAN V. HENRY,
Honorary Secretary.

The Joseph Bancroft Memorial Lecture.

The Joseph Bancroft Memorial Lecture was delivered by Dr. Weston Hurst, of Adelaide, on June 7, 1940, in the lecture hall of the medical school. Representatives of the Senate, the Professorial Board and senior medical students of the University of Queensland and members of the Council of the Royal Society of Queensland were present by invitation. There was also a large attendance of members of the Branch. The subject of the lecture was "Influenza and other Respiratory Infections due to Viruses". A vote of thanks to the lecturer was moved by Dr. Noel M. Gutteridge, seconded by Dr. E. H. Derrick, and was carried by acclamation.

At the conclusion of the lecture the President presented the Joseph Bancroft Memorial Medal to the lecturer.

The Jackson Lecture.

On September 20, 1940, Dr. S. F. McDonald delivered the Jackson Lecture, his subject being "The Debt of Medical Science to the Fighting Forces".

British Medical Agency of Queensland Proprietary Limited and Queensland Medical Finance Proprietary Limited.

Mr. S. N. Cobbold, who had been manager and secretary respectively of the above-mentioned companies since their inauguration, is now on active service with the Royal Australian Navy. Prior to his departure a letter was sent by the Council congratulating him upon the success that has accompanied his efforts. During his absence Mr. F. K. Davis has been appointed as acting manager and secretary.

Owing to the war the activities of the agency have been somewhat curtailed, and members are asked to make all possible use of the services offered.

A handbook giving useful information regarding medical practice is being published by the agency for distribution to members of the Branch and will be ready shortly.

Nutrition Pamphlets.

The pamphlet which was drawn up some time ago by the Nutrition Committee, "Adequate Nutrition during Pregnancy and Nursing", has been revised and a further pamphlet, entitled "Recommended Diet", for general use, has been prepared. These pamphlets are suitable for members to give to their patients, and copies are obtainable at the office of the Branch at a small cost.

Scheme for the Evacuation of Children of British Doctors.

A scheme for the evacuation of children of members of the profession in Great Britain to come to Australia to be cared for by the families of doctors was put into operation. Five members signified their willingness to look after mothers and children, and fifty-three members were prepared to care for sixty-four unaccompanied children. The scheme failed to develop mainly owing to the difficulty of supplying safe transport by sea.

The Council desires to express its thanks to those members who were prepared to cooperate.

Federal Council.

Two meetings of the Federal Council were held during the year, one in Melbourne on February 29 and the other in Sydney on September 2. The Branch was represented at both these meetings by Dr. T. A. Price and Dr. D. Gifford Croll. Reports of the proceedings of these meetings were published in THE MEDICAL JOURNAL OF AUSTRALIA.

Dr. T. A. Price was reappointed to represent the Branch on the Contract Practice Subcommittee of the Federal Council.

Medical Officers' Relief Fund (Federal).

The Federal Council has made a statement to the effect that this fund is for the use of returned medical officers who were disabled or died in the last war, 1914-1918, as the result of war service, and their widows and children. The fund is not applicable to the present war. The assets of this fund are £10,151 19s. 1d. The attention of members of the Branch has been drawn to this fund and to the conditions under which it is available.

During the year further assistance was rendered to a widow of a deceased member of the Branch.

The Federal Council has been requested to consider the inauguration of a Returned Medical Officers' Relief Fund for those requiring assistance as a result of the present war.

The Australasian Medical Publishing Company, Limited.

This company has now taken over the annual publication of "Knox's Medical Directory for Australia". The publication of the annual list of members of the Branches of the British Medical Association in Australia has been discontinued.

The University of Queensland Medical School.

This year is most eventful in the history of the medical school of the University of Queensland, as the first batch of medical students will graduate next month.

Eustace Russell Memorial Prize: A prize in memory of the late Dr. Eustace Russell will be awarded to the graduate who obtains the best result in clinical medicine.

The Harold Plant Memorial Prize: An amount to endow this prize was given in trust to the Queensland Branch of the British Medical Association by the family of the late Dr. Harold Plant, who met his death in the 1914-1918 war. The prize is to be awarded to the Queensland medical graduate who obtains the best results in scholarship; character, conduct and proficiency in sport are also being taken into consideration. The prize is to be described as the "Harold Plant Memorial Prize", and it is to be presented annually by the President of the Queensland Branch of the British Medical Association. A résumé of Harold Plant's career will be read at the presentation.

Post-Graduate Medical Education: A joint committee of represenatives of the University Senate and the Council of the Branch is considering the question of Post-Graduate Medical Education in Queensland, and several meetings have taken place.

The Medical Board of Queensland.

In December, 1939, Dr. D. Gifford Croll, Dr. R. G. Quinn and Dr. Kenneth Wilson were reappointed members of the Medical Board of Queensland for a period of five years, under the provisions of the *Medical Act* of 1939. The period of such appointments previously had been three years. Owing to his enlistment for active service with the second Australian Imperial Force, Dr. Kenneth Wilson resigned his position on the Board in June last, and Dr. J. G. Wagner was nominated and subsequently appointed to fill the vacancy.

The Medical Act of 1939.

The *Medical Act* has recently been amended to permit the suspension of the provision whereby medical graduates were required to do one year's service in an approved hospital prior to being eligible for registration in Queensland. Before this action was taken it had been suggested by the Council to the Minister for Health and Home Affairs, that one year's service in the Army Medical Corps of the second Australian Imperial Force should be regarded as equivalent to the year's hospital service required under the Act.

No list of specialists has yet been drawn up, as provided in the Act. A list of classes of specialists compiled by the Medical Board of Queensland was submitted to the Council for any suggestions the Association may desire to offer as to what it considers should be the branches of medicine which should be regarded as specialties for the purposes of the Act. A subcommittee was appointed to deal with the matter and a report was subsequently forwarded to the Medical Board.

Medical Assessment Tribunal.

A Medical Assessment Tribunal has been constituted in accordance with the *Medical Act* of 1939. Under the provisions of the Act the tribunal is constituted by a judge of the Supreme Court with two medical assessors. Dr. Alex. Marks was nominated by the British Medical Association, and he was subsequently appointed a medical assessor. The other medical assessor is Sir Raphael Cilento, who was appointed by the Government.

One case was dealt with by the Medical Assessment Tribunal during the year, and the finding was published in the *Government Gazette* of August 24, 1940, giving the decision regarding Dr. Max Michel, who was found guilty of misconduct in a professional respect, and his name was ordered to be erased from the list of medical practitioners of Queensland.

Congratulations.

During the year letters of congratulation have been sent to Dr. Charles Kellaway concerning his election as a Fellow of the Royal Society; to Dr. S. F. McDonald, congratulating him upon his election as a Fellow of the Royal College of Physicians, London; to Dr. Bruce T. Mayes, who has been appointed to the position of professor of obstetrics in the University of Sydney.

Finance.

The year's operations resulted in a small surplus. As the Branch will need to have a reserve available for organization purposes in the near future, the Council will continue to exercise all possible care in the use of Branch funds.

Red Cross Society Appeal.

A special Red Cross Society appeal was made to members of the Branch, which resulted in the sum of £556 5s. 6d. being handed over to the fund. This amount is in addition to individual donations given by members to the Red Cross Society in Queensland.

Social.

On June 7, 1940, the President and members of the Council entertained the following guests at dinner at the National Hotel, prior to the Bancroft Memorial Lecture: Dr. E. Weston Hurst (Adelaide), Dr. Cotter Harvey (Sydney), and Dr. Norman Sherwood, Honorary Secretary of the Queensland Post-Graduate Committee.

The pharmaceutical bowlers were successful in winning the cup presented by Messrs. Bosch, Barthel and Company for a bowls competition between members of the medical, dental and pharmaceutical professions for 1939. The cup had previously been held by the medical bowlers for a number of years. The 1940 match is still undecided.

Golf: It has been decided to abandon the golf competition for the duration of the war. This cup has been presented

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

(INCORPORATED.)

Balance Sheet as at November 15, 1940.

LIABILITIES.	£	s.	d.
British Medical Association, London—Balance Subscriptions Account	70	2	8
Australasian Medical Publishing Co. Ltd., Sydney	49	15	0
English, Scottish and Australian Bank Ltd., Brisbane—Overdraft—Building Fund Account	1,413	7	10
Loan from Queensland Medical Land Investment Co., Ltd.	1,900	0	0
Loans from Members repayable May 15, 1943 £3,047 10 0			
Interest accrued to November 15, 1940 76 3 9			
	3,123	13	9
Reserve—Dinners, Entertainments, etc.	31	17	2
Sinking Fund	331	19	2
Accumulation Account—Balance at 16/11/1939 £2,182 16 0			
Add Surplus of Income over Expenditure twelve months ended November 15, 1940 335 11 4			
	2,518	7	4
	£9,439	2	11

ASSETS.	£	s.	d.
Freehold Property, "B.M.A. House", 225 Wickham Terrace, Brisbane (*less* Depreciation on Building to November 15, 1940)	2,701	0	0
B.M.A. Rooms, Wickham Terrace, Brisbane—Library, Book Cases, Furniture, Lantern, Typewriters, etc.	273	0	0
Museum Specimens	5	0	0
Queensland Medical Land Investment Company Limited—5,950 shares of £1 each, paid to 10s. each—at cost	2,975	0	0
British Medical Agency of Queensland Pty. Limited—257 shares of £1 each, fully paid—at cost	257	0	0
Australasian Medical Publishing Company Ltd., Sydney—Two 5% debentures of £25 each and one of £5	55	0	0
Sinking Fund Investments—Australian Consolidated Inscribed Stock—3¾% 1951—£280, at cost £278 3 3			
Commonwealth Savings Bank, Brisbane—Credit Balance, Current Account 53 15 11			
	331	19	2
Sundry Debtors	442	0	0
City Electric Light Co. Ltd.—Deposit Account	6	0	0
English, Scottish and Australian Bank Ltd., Brisbane—Credit Balance, General Fund A/c £2,384 1 1			
Cash in Hand 9 2 8			
	2,393	3	9
	£9,439	2	11

We have examined the above Balance Sheet and have obtained all the information and explanations we have required.

In our opinion the Balance Sheet is properly drawn up to exhibit a true and correct view of the state of the Association's affairs as at November 15, 1940, according to the best of our information and the explanations given us, and as shown by the books of the Association.

R. G. GROOM & Co.,
Chartered Accountants (Aust.),
Auditors.

Brisbane,
November 18, 1940.

R. G. QUINN,
Hon. Treasurer.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.
(INCORPORATED.)

Revenue Account for Twelve Months ended November 15, 1940.

EXPENDITURE.

Nov. 15, 1940.	£ s. d.	£ s. d.
To Library Expenditure	55 3 4	
„ Branch Expenses	688 18 8	
„ Expenses of Members on Branch Business	120 2 0	
„ Federal Council—Contribution to General Expenses	133 0 0	
„ Depreciation—Furniture, Bookcases, Fittings, Typewriters, etc.	13 15 0	
		1,010 19 0
„ Expenses B.M.A. House—Rates, Land Tax, Insurance, Repairs and Sundries	212 1 4	
Cleaning	79 17 3	
Interest on Loans from Members	152 7 6	
Depreciation, Building	63 0 0	
	507 6 1	
Less Rents	260 0 0	
		247 6 1
„ Accumulation Account—Profit for year transferred		335 11 4
		£1,593 16 5

INCOME.

Nov. 15, 1940.	£ s. d.	£ s. d.
By Branch and Organization Fund Subscriptions	£1,586 3 9	
„ Australasian Medical Publishing Co. Limited—Interest on Debentures	2 15 0	
„ Sundries	4 17 8	
		1,593 16 5
		£1,593 16 5

GENERAL FUND.

Statement of Receipts and Payments for Twelve Months ended November 15, 1940.

RECEIPTS.

Nov. 16, 1939.	£ s. d.	£ s. d.
To Credit Balance at E.S. & A. Bank Ltd., Brisbane	£2,336 4 2	
„ Cash in Hand	0 9 1	
		2,336 13 3
Nov. 15, 1940.		
To Subscriptions—For remittance to British Medical Association, London	649 11 3	
For remittance to THE MEDICAL JOURNAL OF AUSTRALIA, Sydney	511 2 6	
Queensland Branch Subscriptions	645 14 3	
Organization Fund, Queensland Branch	940 9 6	
		2,746 17 6
„ Rent from B.M.A. House, Wickham Terrace		28 0 0
„ Sundry Receipts		7 17 8
„ Australasian Medical Publishing Co. Ltd.—Interest on Debentures, £55 at 5% p.a., 12 months to June 30, 1940		2 15 0
		£5,122 3 5

PAYMENTS.

Nov. 15, 1940.	£ s. d.	£ s. d.
By British Medical Association, London—Amounts remitted to London on account of subscriptions collected	641 11 4	
„ Australasian Medical Publishing Co. Ltd., Sydney—Amounts remitted to Sydney on account of Medical Journal Subscriptions collected	509 4 0	
		1,150 15 4
„ Transfer to Building Fund Account		500 0 0
„ Library Expenditure		55 3 4
„ Expenses of Members on Branch Business—Dr. T. A. Price	90 14 0	
Dr. Gifford Croll	29 8 0	
		120 2 0
„ Federal Council—Contribution to General Expenses		133 0 0
„ Branch Expenses—Salaries, Audit and Honoraria	502 9 10	
Postages and Duty Stamps	48 14 10	
Printing and Stationery	47 11 0	
Telephone Rental and Calls	27 16 8	
Legal Expenses	22 11 6	
Electric Light	10 9 11	
Bank Charges	0 15 1	
Council and General Meeting Expenses, Balopticon Operator and Sundries	28 11 10	
		689 0 8
„ Payments on account of B.M.A. House, Wickham Terrace—Repairs and Maintenance	1 1 1	
Cleaning	79 17 3	
		80 18 4
„ Credit Balance at E.S. & A. Bank Ltd., Brisbane		2,384 1 1
„ Cash in Hand		9 2 8
		£5,122 3 5

BUILDING FUND.

Statement of Receipts and Payments for Twelve Months ended November 15, 1940.

RECEIPTS.

Nov. 15, 1940.	£ s. d.
To Rents from B.M.A. House, Wickham Terrace	24 0 0
„ Transfer from General Fund	500 0 0
„ English, Scottish and Australian Bank Ltd., Brisbane Overdraft	1,413 7 10
	£1,937 7 10

PAYMENTS.

Nov. 16, 1939.	£ s. d.
By English, Scottish and Australian Bank Ltd., Brisbane, Overdraft	1,572 14 3
Nov. 15, 1940.	
By Rates, Land Tax, Insurance and Maintenance B.M.A. House, Wickham Terrace	211 0 3
„ Interest on Loans from Members	152 7 6
„ Bank Charges and Sundries	1 5 10
	£1,937 7 10

by the Wilca Dental Company for a golf contest between doctors, dentists and chemists.

Conclusion.

The report shows that the year has been a very busy one for members of the Council and for Mrs. Spooner and her office staff.

The Council wishes to express appreciation of the loyalty and devotion to duty of the members of the staff during the year, and to make special mention of their splendid work in compiling the survey of medical man power.

The Council also desires to express its thanks to Dr. D. Gifford Croll for the gift of a large office table, which is most useful.

(Signed) C. E. WASSELL,
President.

FINANCIAL STATEMENTS.

The Honorary Treasurer presented the financial statements, which were taken as read on the motion of Dr. H. W. Horn, seconded by Dr. S. F. McDonald; their adoption was moved by Dr. R. G. Quinn, seconded by Dr. J. L. Simmonds. The statements are published herewith.

ELECTION OF OFFICE BEARERS.

The Chairman announced the result of the election of office bearers and members of the Council:

President: Dr. J. G. Wagner.
President-Elect: Dr. F. W. R. Lukin.
Past-President: Dr. C. E. Wassell.
Honorary Secretary: Dr. H. G. Earnshaw.
Councillors: Dr. R. G. Quinn, Dr. D. G. Croll, Dr. L. H. Foote, Dr. B. T. Hart, Dr. H. W. Horn, Dr. A. E. Lee, Dr. S. F. McDonald, Dr. A. Mason, Dr. Mervyn Patterson, Dr. A. T. Price, Dr. J. L. Selwood, Dr. C. H. Lloyd, Dr. J. L. Simmonds, Dr. W. H. Steele, Dr. L. P. Winterbotham.

ETHICS COMMITTEE.

On the motion of Dr. J. G. Wagner, seconded by Dr. L. H. Foote, Dr. Alex. H. Marks, Dr. G. P. Dixon, Dr. G. W. Macartney, Dr. Gavin H. Cameron and Dr. M. Graham Sutton were appointed members of the Ethics Committee.

INDUCTION OF PRESIDENT.

Dr. R. G. Quinn then inducted Dr. J. G. Wagner to the chair.

PRESIDENT'S ADDRESS.

Dr. J. G. Wagner then read his address (see page 1).

VOTES OF THANKS.

Dr. J. G. Wagner moved and Dr. F. W. Lukin seconded a vote of thanks to Mrs. Spooner for her work as Secretary. The motion was carried by acclamation.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 245, of December 5, 1940.

NAVAL FORCES OF THE COMMONWEALTH.

His Excellency the Governor-General in Council has approved of the appointments of Surgeon Captains Leonard Darby, C.B.E., and William James Carr, C.B.E., as Honorary Surgeon and Honorary Physician, respectively, to His Excellency the Governor-General being terminated, dated 7th November, 1940.—(Ex. Min. No. 89.)

CITIZEN NAVAL FORCES OF THE COMMONWEALTH.

Royal Australian Naval Reserve.

Appointment.—Richard Fitzwalter Read is appointed Surgeon Lieutenant, dated 31st October, 1940.

AUSTRALIAN MILITARY FORCES.

NORTHERN COMMAND.

First Military District.

Australian Army Medical Corps.

Lieutenant-Colonel B. F. R. Stafford from the Reserve of Officers (A.A.M.C.), is appointed to command a Field Ambulance, 1st October, 1940.

SOUTHERN COMMAND.

Third Military District.

Australian Army Medical Corps.

To be Lieutenant-Colonel (temporarily)—Major L. Harbeck, 27th September, 1940.

Nominations and Elections.

THE undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

Bodley, Phyllis Ellen, M.B., B.S., 1939 (Univ. Durham), "Woodstock", 172, Pacific Highway, North Sydney.
Gray, Franklin John, M.B., B.S., 1939 (Univ. Sydney), Sydney Hospital, Sydney.

Diary for the Month.

JAN. 6.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JAN. 7.—New South Wales Branch, B.M.A.: Council (Quarterly).
JAN. 8.—Western Australian Branch, B.M.A.: Council.
JAN. 10.—Queensland Branch, B.M.A.: Council.
JAN. 14.—Tasmanian Branch, B.M.A.: Branch.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Proserpine District Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

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